

Apple2000

THE NATIONAL APPLE USERS GROUP



FEBRUARY 1987

VOLUME 1(3)



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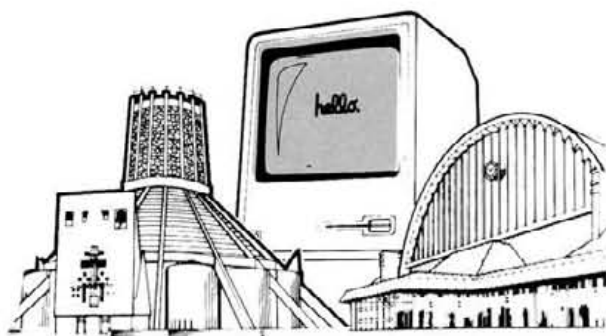
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The Winning Macintosh Team

There's something very special about them all!

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Apple2000

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Coming in the April Issue

MICE 87 - A PREVIEW
APPLE IIGS - WHATS NEW
APPLE IIGS - HOT PRODUCT
NEWS
APPLE II & MACINTOSH
REVIEWS
SPECIAL OFFERS
WORKSHOP NEWS

EDITORIAL

Disabled! Who are they? Who cares?

The computer is a help in many areas, you the membership will use it to make your working life easier and more productive, or perhaps you use it to entertain when away from work. The computer is many things to many people and an area that is often forgotten is that of the disabled person.

The computer as a tool makes the life of the disabled person more liveable; it makes communication between the disabled and able-bodied a reality.

There are many forms of disability, those that strike you down permanently, and others that occur at irregular intervals but because of their crippling nature mean no hope of leading a normal life. A computer in these circumstances can be a life saver.

Take for instance the person who has extreme difficulty in communicating either by voice or writing, the use of a computer as an interface can be the only way that he or she can talk to others. Devices have been developed that now let the most disabled person communicate - it may be by pointing with a wand or by means of the head or foot using a switch as an input device. The computer allows the disabled person to present themselves in a dignified way, after all the computer printer does not stamp the letter I AM DISABLED on its print-out.

So where does Apple come into this story? Well Apple have produced one of the easiest machines to interface to - its the Macintosh at the moment, but I am sure the GS will be next in line. By making things easy it ensures that the disabled user can concentrate on producing the result.

It is a sad fact that most disabled are unable to afford an Apple. Apple (UK) can help, but pricing policy and the mine field of deciding who would qualify makes the whole issue a 'hot-potato'. Hopefully this can be resolved in the near future so that more of the disabled can benefit from modern technology -. The 'in machine' appears to be the Macintosh, so lets see Apple show how they care, they will win in the end - you should see the publicity that BIT32 have had with the Headstart system!

I hope you all enjoyed the festive season, roll on summer.

Jim Panks
Jim Panks

Settling down to the New Year, Machines and what-have-you !

Welcome to the New Year with Apple2000 and a brand new cover, you will also see that this is the largest issue so far. In the future we will be featuring. April Issue: Mice 87. June Issue: DTP and Word Processing on all Apple Machines.

We could do with more help and hope to have a system where any member can contribute to the common good. We are setting up a new editing system where we can have a number of Reviewers, Copy Readers and Sub-Editors all doing a portion of the total work. This would take the strain off the present management team and allow them to organise other events. If you can help, drop us a line if you haven't already.

Response to the questions on the renewal forms was overwhelming and I would like to thank all who took the trouble. As a direct result of the replies received we are re-introducing a workshop programme. If you did not get a response form last issue, we enclose one this time. Please complete it so that your voice is heard in our planning for future activities.

The calendar is filling up quickly; we have the Which Computer Show in February, followed in March by the Apple 87 Show at Bewdley. April sees a Mac Expo in Rotterdam (we are arranging a day-trip) followed by the MICE 87 Show in May (See special offer in this issue).

Expect to see some new Apple products launched in the first quarter (American term for soon!) of this year. New machines are expected to be 'up market', i.e. pushing the price of the Mac Plus down and putting a work station like machine as the Apple flagship. I do not expect the new machine/s to be cheap, a few years ago Apple launched the Lisa (Light Years ahead of the rest) and that cost a small fortune !

I look forward to seeing many of you at the Apple 87 Show on March 21st or the AGM on April 4th, where there could be some surprises !

ABOUT.....

Next Issue.....

Copy Date 5th March 1987

Contributions

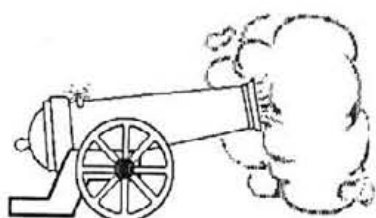
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Ask for our 'Guide for Contributors'

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Micol Basic £59.80

Micol Assembler

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Macintosh Programmers 'Get the POWER without the PRICE'

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Getting the Most from your Apple II
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* II +,e,& GS requires Apple SCSI card available at £69 + VAT

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We can offer this excellent POWER USERS upgrade for only £299.00 + £5.00 Postage + VAT. Also available 4MB upgrade for £1299.00 + VAT 🍏

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Data Highway: Communications Software for Apple II	£54
Nightingale: 1200/75 300/300	
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Nightingale & Data Highway	£195
Palette: Colour Card with Mastercard,	
Nightingale & Data Highway	£254
Linnet: V21 & V23 speed buffered	
auto dial/answer modem	£136
Series Four: V21 & V23 modem	
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All above comms prices include VAT & Postage

ACT 3.5 inch Disks at a STEAL

I did not mean to swear in our journal but the prices are reasonable and the Mac & GS will use ACT disks - they look nice in orange - only a limited quantity so order NOW !!!!

SS/DD 10 disks	£18.50
DS/DD 10 disks	£26.00

Apple //e plusRAM 256k card with onboard expansion to 1MB

PlusRAM is made in the U.K. and comes with 256k RAM fitted and sockets to bring it upto a full Megabyte. Extend your Appleworks desktop upto 1012k, have over 5000 records or very large word processor files.

Fully compatible with all standard Apple II programs. Automatically recognised by ProDOS, CP/M Plus, Pascal - use directly with Pinpoint, Mouse and PFS series.

Normal Price £99.00 but Apple2000 members can save by sending only £80.00 + £2.00 Postage + VAT 🍏

Show 87 BEWDLEY March 21st 1987 BOOK NOW LIMITED SPACE

'Hardware at a SOFT PRICE...'

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The GE Clock Card comes complete with Utilities to allow use under Pro-DOS, DOS 3.3 and Pascal. Normally retailing at £95 we can offer this to members at £29.00 + £2 Postage and VAT. 🍏

64k/80 Column Card for //e

This card emulates the Apple Card and is useful when using AppleWorks Usually priced at £69 we offer it at £29.00 + £2 Postage and VAT. 🍏

640k High Density Disk Drive.

Uses the normal disk controller card and gives 4.5 times the storage of a normal drive. It will also read low density disks.

Usual priced at £290 we offer it for a mere £199.00 + £5.00 Postage and VAT. 🍏

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Local Group News

by Tom Wright

A shorter column this month (who said thank goodness ?), due to 'earning a crust' taking more of my time, and pressure on column space.

The number of identified local groups continues to grow and this month we welcome MacTaff (South Wales Mac Group) and the Apple II Programmers Club to our circle of friends.

I have managed to visit two groups since writing the last column, and Ike will have visited another by the time you read this. Hopefully I'll be able to visit more in the not too distant future, not just to meet my responsibility as compiler of this column, but also to find out what help we can all offer each other and to continue my own education which is helped enormously by the visits (knew I'd have a selfish motive somewhere didn't you ?).

APPLE II PROGRAMMERS CLUB

Philip Dixon is based in Hexham so his initiative should be doubly welcome to all Apple users in that area as it's the first group opportunity that we've found in Northumberland. The club started recently on a basis of four newsletters per year, concentrating on Assembler and BASIC programming; Philip is now interested in helping to bring Apple users together with regular meetings etc. Please contact Philip to let him know that you are interested and whether or not you are prepared to help with club organization (not a demanding task if duties can be shared between several people). All Apple users are invited to join in. Congratulations on the initiative Philip.

MACTAFF - will have held three meetings by the time this column appears. Lorraine Thornback (group secretary) tells me that AppleCentre South Wales provides the venue for the group and that the

group's formation is due to the initiative of people within that company. The group is the first that we are aware of in Wales and its formation must be good news for Apple users in range of Cardiff. All Apple users are welcome.

EAST OF SCOTLAND APPLE USERS GROUP - reported in the last column as the Edinburgh group had its first meeting in November at Proteus Micro Systems in Edinburgh, the large number of people attending were rewarded with an excellent venue and friendly hospitality by Proteus. Didn't waste any time this lot, committee members were elected during the first meeting ! The second meeting in December was also attended by representatives from two of the other Apple dealers in Edinburgh who are displaying support for the IIGS in Scotland as well as a presentation of the new Guide Software for the Macintosh by Ian Ritchie (Office Workstations Ltd). The January meeting featured Pagemaker and D.T.P at MacQueen Systems premises. The committee are considering a range of interesting topics for future meetings, and it is possible that a competition will be run to provide a name for the group. My thanks to everybody there for a very enjoyable evening. Contact Adam Gilinsky to confirm venue before you go along.

GATEWAY COMPUTER CLUB - I managed to attend their Family Computing day in November and was very impressed by their organization and friendliness. Anybody in the Mildenhall area who doesn't at least try this club "wants their hammers" as my relations would say, it's a great facility and the amount of help and advice available there is impressive. Only

problem that I had there was that when I tried to spend money (yes it does happen occasionally) most people started to talk about some lady called Dolores Sense, very odd. The development of Apple machines was very well displayed by the presence of Apple II, III, Lisa, Macintosh, and IIGS, a very interesting experience.

The club's chairman is now known as Bob MacHall since his fingers became fused to the keyboard of his recently acquired Macintosh. One of the displays included a video of U.S.T.V commercials for Apple, might sound a bit odd but I found the range of advertising that it showed not to mention the variety of Apple Tea shirts fascinating. I strongly recommend that anybody in the area gives Bob a call to arrange to go along to a meeting.

CAMBRIDGE APPLE USER GROUP - this group is firmly established, the organiser of their original venue has gone off to dig up another Tootandcars so the meetings are flexible so be sure to phone Ian Archibald before going to a meeting. The range of Apple experience between the members is fairly extensive so it is likely that most people can learn something from them, as well as contributing to the group.

MIDAPPLE - may have produced the first rainbow coloured newsletter in the U.K in December using a IIGS and an Imagewriter. The GS was loaned by Apple U.K. We have a steady growth in membership and have the use of an excellent venue which is well provided with Apples. Most of the members use Apple II models with three of them having acquired the GS, several members are Macintosh users.

HERTS & BEDS GROUP - continues to provide a varied range of topics for members and is well worth a look by anybody in their area.

Out of time and space now so that's it for this issue. We have plenty to look forward to in 1987 already with the list of shows beginning to appear, don't miss Ike's Apple Jamboree at Bewdley it sounds as if it's going to be even better than last year. 🍏

Annual General Meeting

1330 hours

Saturday 4th April 1987
West Midland Safari Park
Bewdley, Worcestershire.

The time has come once again for the Annual General Meeting of the Group. This year we hope you will come along to hear what we have done over the last year and to hear about what we have planned for the next.

We will hold the meeting at the West Midland Safari Park at 1.30pm. sharp. Prior to the meeting we will be having some short demos on new software and hardware for the Mac and IIGS. The latest in music will be shown by Greengate. You may even have a chance to see first hand how the journal is put together with a special DTP session.

No charge to get in - just come along
YOU WILL BE WELCOME.

All members will have received the official notification with the accounts, if you have not received them please write or phone the Office A.S.A.P.



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GETTING INTO SHAPE WITH YOUR APPLE - PART 2

Allan Boardman and Graham Keeler
Department of Pure and Applied Physics, University of Salford

This is the second part of our article on shape tables, and this time we shall describe the use of shape tables, and give the generator program for creating shape tables simply.

Drawing the shape

Drawing and manipulating the shapes uses the convenient commands DRAW, XDRAW, SCALE and ROT. Briefly, DRAW and XDRAW are the commands which actually create the shape on the screen and they need colour, rotation and scale to be set first. They operate as follows:

DRAW n AT x,y

draws, in high resolution graphics, the nth shape from your shape table with x,y being the position on the screen of the starting point of the definition of the shape. It is for this reason that it is often best to start a shape from its centre. The restrictions are $0 < n < 255$ and x,y must be somewhere on the graphics area. XDRAW n AT x,y performs exactly the same function as DRAW but in a complementary colour to that already on the screen; in high resolution graphics the Apple colour palette is

Colour	Complementary colour
Black	White
White	Black
Violet	Green
Orange	Blue
Green	Violet
Blue	Orange

There are two uses of XDRAW. If the original shape is drawn in white on a black background, then XDRAW gives a simple method of erasure. On the other hand, if the screen already has a partly coloured (or white) background, the shape should be created with XDRAW, and it will show up whatever the background. For instance, it will appear as a black silhouette on any portion of white background. A second XDRAW will then effectively erase the shape, leaving the background intact. This procedure should always be used if you want to be able to erase a shape from a multicoloured background. You cannot draw a specifically coloured shape with XDRAW - it draws in the inverse of the colour (or colours) already on the screen (e.g. violet on a green background).

The manipulation command ROT=m rotates a shape by an angle proportional to m where $0 < m < 255$, and such that, for example, $m = 16$ corresponds to a 90 degree rotation. Thus a maximum of 64 rotational positions are available and higher values of m are treated modulo 64. $m = 0$ corresponds to no rotation at all, $m = 8$ is a 45 degree rotation and beyond $m = 16$ each increase of 16 adds 90 degrees. The command SCALE (to be discussed in detail below) has an influence on these rotations and it is very important, at this stage, to state that a ROT command must be used that is valid for the chosen SCALE command, otherwise false results can be produced. SCALE = 1 allows 4 rotations in steps of 90 degrees ($360/4 = 90$ degrees), SCALE = 2 allows 45 degree rotations and so on. The number of rotations doubles each time and the 64 rotations of 5.625 degrees achieved with SCALE = 5 is the maximum that is available.

The actual SCALE manipulation command is, at face value, somewhat deceptive. Its format is:

SCALE = S

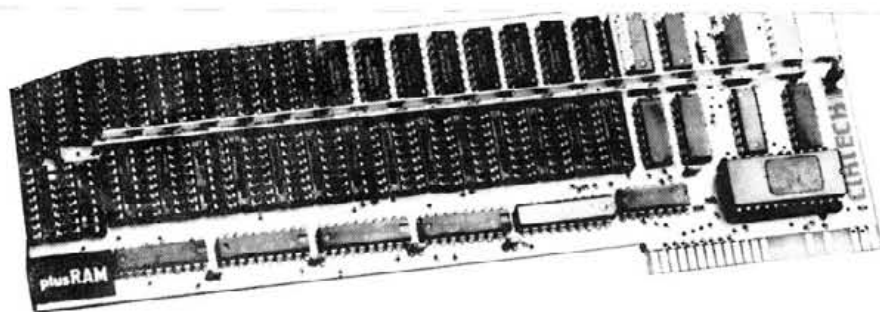
with the restriction $0 < S < 255$ (n.b. SCALE = 0 gives the maximum size as if S had the value 256 and is the default value. This point should be watched for since it is unlikely to be the value you want. You should always set SCALE before drawing a shape). The action of this manipulation command is as follows

S = 1 : one pixel lit up for each plotting vector
 one pixel left unlit for each non-plotting vector
S = 2 : two pixels lit up for each plotting vector
 two pixels left unlit for each non-plotting vector
 .
 .
 .
S = n : n pixels lit up for each plotting vector
 n pixels left unlit for each non-plotting vector

A restriction is that the shape must not overflow the screen size.

The action of the SCALE command is not, as might have been expected, to plot the shape on a larger scale. The effect is much more complicated, a fact that, as we shall now see, makes the SCALE command of somewhat limited use.

Suppose we consider the square again. It is made up of four plotting vectors. Each plotting vector, for SCALE = 1, lights up one pixel so that the pixel appearance on this, the lowest



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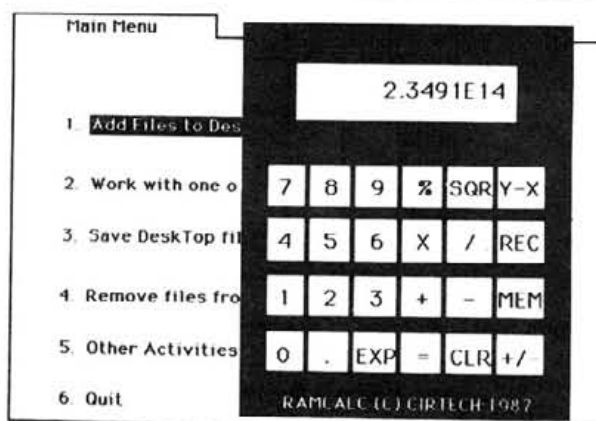
- **plusRAM** extends the AppleWorks desktop up to 1012K
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- Automatically divides large files to several disks
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MAIN MENU



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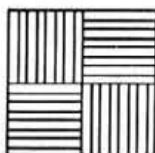
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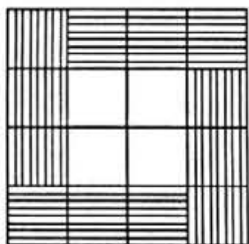


scale, is



where four adjacent pixels are illuminated. Here the changes in the inclination of the shading is an attempt to show vector direction as we go around the square.

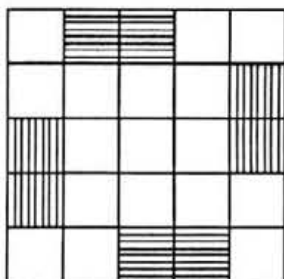
If a larger scale, say $SCALE = 3$, is specified the effect on each vector, plotting or non-plotting, is TO GENERATE 3 LIT OR UNLIT PIXELS IN THE PLOTTING DIRECTOR OF THAT VECTOR. The original square shape then becomes



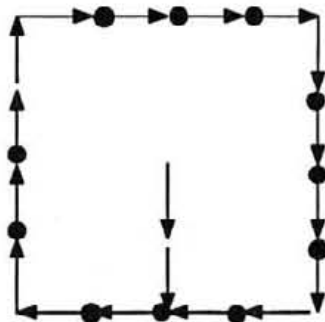
This shape is, of course, still a square. What then is happening in terms of pixels? The $SCALE = 1$ effect is the one that we were assuming at the beginning of this article, but for example, with $SCALE = 3$



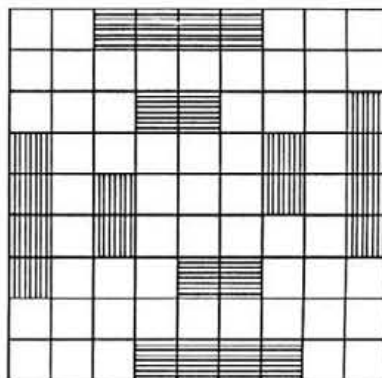
where we now see that with $SCALE = N$ the plotting vector moves on and leaves a trail of N lit pixels behind it. Similarly a non-plotting vector leaves a trail of unlit pixels behind it. The situation becomes less satisfactory with a more complex initial shape such as



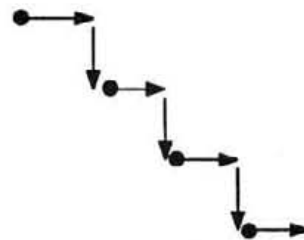
If the origin is at the centre of the shape this is really the set of vectors



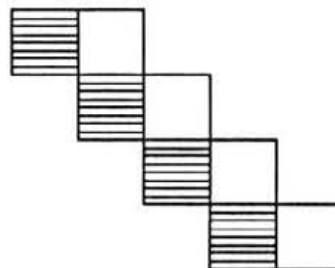
Here if this shape is plotted in the same position but with, successively, $SCALE = 1$ and $SCALE = 2$ the following figure will be produced:



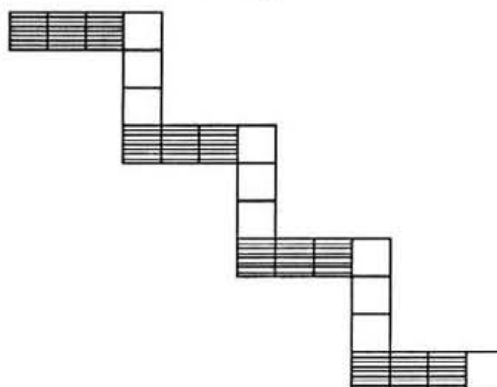
The limitation of the $SCALE$ command is perhaps most vividly shown with a diagonal line. Suppose that a line is plotted by the vectors:



The operation of the $SCALE$ command is such that for $SCALE = 1$ the line appears as



whereas with $SCALE = 3$ its appearance is



We see that for $SCALE = 1$ this gives the required diagonal line, but for $SCALE = 3$ the shape is turned into a series of horizontal lines. Thus the use of the $SCALE$ command is extremely limited, especially for a beginner, unless a great deal of time and effort is expended. The main immediate use of shape tables, and their great flexibility, is in defining a $SCALE = 1$ shape that can be plotted repeatedly, or at any chosen point on the screen.

Using the shape table generator program

You can now try your hand by using the program listed here to generate any shape that you desire. This program was first published in Graham Keeler's book, 'Getting the Most from your Apple II/IIe/IIc', published by Addison Wesley, and is reproduced with their permission.

The program can be used in either of two ways. If you draw out your shape on squared paper, it can be entered by specifying each plotting vector in turn. Alternatively, you can enter a shape and watch it drawn directly on to the screen. In this case you must specify the starting position, but this can of course be changed when you draw the shape later.

With either method, mistakes can be cancelled, any number of shapes can be drawn, and when completed they are entered, complete with the pointer at \$E8 and \$E9, and are also saved to disc if required. The problem of upward non-plotting vectors is dealt with. The shape table is also listed to the screen in case you wish to enter it by hand.

Remember that if you reload the shape table at a later date, the pointer to the shape table must be set again.

The graphics method will also help you understand better just how the plotting and non-plotting vectors work - you will see the flashing cursor moving about the screen, leaving its trail of lit (or unlit) pixels behind it.

Finally, to demonstrate the use of shape tables, a small program is given that enters our second shape into memory at address \$300 by a series of POKE commands, sets the pointers and demonstrates the plotting of shapes by plotting repeatedly with different values of SCALE to produce an attractive pattern on the screen.

Shape Table Generator

```
5 LOMEM: 17000
10 TEXT : HOME : NX = 0
20 DIM X(2000),Y(1000)
30 PRINT "THIS PROGRAM GENERATES A SHAPE TABLE": PRINT
40 PRINT "IN HEXADECIMAL FORM.": PRINT
50 PRINT "DO YOU WISH TO:": PRINT
60 PRINT "1) SPECIFY PLOTTING VECTORS": PRINT
70 PRINT "2) DRAW SHAPE ON THE SCREEN": PRINT : PRINT
80 PRINT "PRESS 1 OR 2:- ": GET CH
90 IF CH < 1 OR CH > 2 THEN PRINT "RESPONSE NOT RECOGNIZED":
HOME : GOTO 50
95 HOME
100 IF CH = 1 THEN GOTO 300
105 VTAB 8
110 PRINT "WHERE WOULD YOU LIKE THE STARTING POINT": PRINT
120 PRINT "ON THE SCREEN?": PRINT
130 INPUT "X COORDINATE? (0-279) ":X: PRINT
140 INPUT "Y COORDINATE? (0-159) ":Y
145 XOLD = X:YOLD = Y
150 HOME
155 PRINT "MOVE THE CURSOR WITH THE DIRECTIONAL": PRINT
160 PRINT "KEYPAD KEYS, I, J, K, M": PRINT
165 PRINT "TO PLOT FUTURE MOVES, TYPE P": PRINT
170 PRINT "TO MOVE WITHOUT PLOTTING, TYPE N": PRINT
175 PRINT "TO PLOT THE PREVIOUS MOVE ONLY, TYPE S": PRINT
180 PRINT "TO CANCEL A CURSOR MOVE, TYPE C": PRINT
190 PRINT "TO END THE TABLE, TYPE Q"
195 PRINT : PRINT : PRINT
200 PRINT "PRESS ANY KEY TO CONTINUE": GET AS
210 HOME : HGR : HCOLOR= 3: VTAB 22
```

```
220 GOTO 400
300 PRINT "FOR EACH VECTOR, SPECIFY VECTOR MOTION": PRINT
310 PRINT "BY THE INITIAL LETTER, AS FOLLOWS": PRINT
320 INVERSE : PRINT "U": NORMAL : PRINT "P": INVERSE :
PRINT "D": NORMAL : PRINT "OWN": INVERSE : PRINT "L":
NORMAL : PRINT "EFT": INVERSE : PRINT "R": NORMAL : PRINT
"IGHT"
325 PRINT
330 PRINT "THEN SPECIFY WHETHER VECTOR IS TO BE": PRINT
340 PRINT "PLOTTED": PRINT : PRINT
350 PRINT "TO CANCEL AN ENTRY, TYPE C": PRINT
360 PRINT "TO END THE TABLE, TYPE Q"
370 PRINT : PRINT
400 I = 0
410 ON CH GOSUB 1000,2000
420 IF LEFT$(PS,1) = "Q" THEN GOTO 430
425 IF I >= 0 THEN X(I) = F
428 I = I + 1: GOTO 410
430 TEXT : HOME
500 PRINT : PRINT "CALCULATING - PLEASE WAIT"
505 Q = 0
510 FOR V = 0 TO I
520 IF A = 2 AND (X(V) = 0 OR X(V) > 3) THEN A = 0:Q = Q + 1
525 IF X(V) > 0 THEN GOTO 550
530 IF X(V + 1) > 0 AND X(V + 1) < 4 THEN GOTO 550
535 IF A = 1 THEN A = 0:Q = Q + 1
540 IF X(V + 2) > 0 AND X(V + 2) < 4 THEN GOTO 550
542 REM CAN'T END BYTE WITH UP NON PLOTTING VECTORS, AS THEY
WILL BE IGNORED
544 Y(Q) = 128:Q = Q + 1: GOTO 580
546 REM 2 UPS AND 1 DOWN FOR 1 UP
550 Y(Q) = Y(Q) + X(V) * (8 ^ A)
560 A = A + 1
570 IF A > 2 THEN A = 0:Q = Q + 1
580 NEXT V
585 IF Y(Q) > 0 THEN Q = Q + 1:Y(Q) = 0
588 HOME
590 PRINT "SHAPE TABLE": PRINT
600 PRINT "BYTE NO.": SPC(6): "VALUE": PRINT
610 FOR V = 0 TO Q
620 HIGH% = Y(V) / 16
630 LOW% = Y(V) - HIGH% * 16
640 IF HIGH% > 9 THEN HIGH% = HIGH% + 7
650 IF LOW% > 9 THEN LOW% = LOW% + 7
660 PRINT SPC(3):V; SPC(16 - POS(0)); CHR$(HIGH% + 176);
CHR$(LOW% + 176)
665 IF INT((V + 1) / 18) * 18 = V + 1 THEN PRINT : PRINT
"PRESS ANY KEY TO CONTINUE LISTING ": GET AS: PRINT : PRINT
670 NEXT V
672 PRINT : PRINT "PRESS ANY KEY TO CONTINUE ": GET AS: HOME
675 IF NX > 0 THEN GOTO 800
680 PRINT : PRINT "DO YOU WANT TO LOAD SHAPE TABLE"
690 PRINT : PRINT "INTO MEMORY? (Y/N) ": GET AS
700 IF AS = "N" THEN END
710 IF AS < > "Y" THEN GOTO 680
720 PRINT : PRINT
730 INPUT "HOW MANY SHAPES TO GO INTO TABLE? ":NX
740 PRINT : INPUT "TYPE START ADDRESS IN DECIMAL: ":AD
750 A1 = AD + 2: REM ADDRESS FOR ADDRESSES
760 HI% = AD / 256:LO% = AD - HI% * 256: POKE 232,LO%: POKE
233,HI%
770 POKE AD,NX
780 POKE AD + 1,0
790 AO = AD + 2 * NX + 2: REM START OF TABLES PROPER
800 HI% = (AO - AD) / 256:LO% = (AO - AD) - HI% * 256
810 POKE A1,LO%: POKE A1 + 1,HI%:A1 = A1 + 2
820 FOR V = 0 TO Q
830 POKE AO,Y(V):AO = AO + 1
840 NEXT V
860 NX = NX - 1: IF NX > 0 THEN GOTO 870
861 HOME : VTAB 10: HTAB 1: PRINT "DO YOU WANT TO SAVE SHAPE
TABLE"
862 PRINT : PRINT "TO DISC? (Y/N) ": GET AS
863 IF AS = "N" THEN END
864 IF AS < > "Y" THEN PRINT CHR$(7): GOTO 861
865 PRINT : PRINT : INPUT "TYPE FILE NAME FOR TABLE: ":NMS
866 PRINT CHR$(4): "BSAVE ":NMS: "A":AD: "L":AO - AD + 1: END
870 FOR V = 0 TO Q:Y(V) = 0: NEXT V
880 FOR V = 0 TO I:X(V) = 0: NEXT V
890 HOME : GOTO 50
1000 PRINT "VECTOR ":I + 1: "
1010 PRINT "VECTOR MOTION: U/D/L/R OR C OR Q ? ": GET FS
```

```

1015 PRINT
1020 F = - 1
1030 IF LEFT$(FS,1) = "U" THEN F = 0
1040 IF LEFT$(FS,1) = "R" THEN F = 1
1050 IF LEFT$(FS,1) = "D" THEN F = 2
1060 IF LEFT$(FS,1) = "L" THEN F = 3
1070 IF LEFT$(FS,1) = "Q" THEN RETURN
1080 IF LEFT$(FS,1) = "C" THEN I = I - 1: GOTO 1000
1090 IF F < 0 THEN PRINT "RESPONSE NOT RECOGNIZED ": GOTO
1000
1100 PRINT "PLOT VECTOR? (Y/N) ";: GET PS
1105 PRINT
1110 IF LEFT$(PS,1) = "Y" THEN F = F + 4: RETURN
1120 IF LEFT$(PS,1) = "N" THEN RETURN
1130 PRINT "RESPONSE NOT RECOGNIZED ": GOTO 1100
2000 VTAB 22: HTAB 1
2010 INVERSE : PRINT "I,J,K,M MOVE CURSOR <P> PLOT <N>
NO PLOT"
2020 PRINT "<S> SINGLE PT <C> CANCEL MOVE <Q> QUIT": NORMAL
2025 PRINT " ": HTAB 1
2030 VTAB 24: HTAB 1
2040 PRINT "CURSOR MOVE: ";: FLASH : PRINT " ": NORMAL
2050 HCOLOR= 0: HPLLOT X,Y:Z = PEEK (49152)
2060 IF Z < 128 THEN HCOLOR= 3: HPLLOT X,Y: GOTO 2030
2061 HTAB 14
2062 PRINT CHR$(Z);
2065 FS = CHR$(Z - 128)
2070 ZZ = PEEK (49168): REM CLEAR KEYBOARD FLAG
2090 IF FS = "Q" THEN RETURN
2095 IF FS = "I" THEN YOLD = Y:Y = Y - 1:XOLD = X:F = 0 + 4 *
PL: HCOLOR= 3 * PL: HPLLOT XOLD,YOLD: HCOLOR= 0: RETURN
2105 IF FS = "J" THEN XOLD = X:X = X - 1:YOLD = Y:F = 3 + 4 *
PL: HCOLOR= 3 * PL: HPLLOT XOLD,YOLD: HCOLOR= 0: RETURN
2115 IF FS = "K" THEN XOLD = X:X = X + 1:YOLD = Y:F = 1 + 4 *
PL: HCOLOR= 3 * PL: HPLLOT XOLD,YOLD: HCOLOR= 0: RETURN
2125 IF FS = "M" THEN YOLD = Y:Y = Y + 1:XOLD = X:F = 2 + 4 *
PL: HCOLOR= 3 * PL: HPLLOT XOLD,YOLD: HCOLOR= 0: RETURN
2130 IF FS = "P" THEN PL = 1:I = I - 1: RETURN
2135 IF FS = "N" THEN PL = 0:I = I - 1: RETURN
2140 IF FS = "S" AND I > 1 AND PL = 0 THEN F = F + 4:I = I -
1: HCOLOR= 3: HPLLOT XOLD,YOLD: HCOLOR= 0: RETURN
2145 IF FS = "S" AND I > 1 THEN I = I - 1: RETURN
2150 IF FS = "C" THEN GOSUB 3000: GOTO 2000
2160 VTAB 24: HTAB 1: PRINT "RESPONSE NOT RECOGNIZED": FOR W
= 1 TO 1500: NEXT : GOTO 2000
3000 IF I < - 0 THEN RETURN
3005 I = I - 1: HCOLOR= 0: HPLLOT X,Y
3010 IF X(I) > 3 THEN X(I) = X(I) - 4
3020 IF X(I) = 0 THEN Y = Y + 1
3030 IF X(I) = 1 THEN X = X - 1
3040 IF X(I) = 2 THEN Y = Y - 1
3050 IF X(I) = 3 THEN X = X + 1
3060 RETURN

```

Shape Demo Program

```

10 POKE 768,1: POKE 769,0: POKE 770,4: POKE 771,0: REM SHAPE
DIRECTORY
20 POKE 772,18: POKE 773,31: POKE 774,32: POKE 775,68: REM
SHAPE TABLE PROPER
30 POKE 776,109: POKE 777,50: POKE 778,214: POKE 779,7
40 POKE 780,0: REM NULL BYTE TO END TABLE
50 POKE 232,0: POKE 233,3: REM SET POINTER TO SHAPE TABLE
60 HGR
70 HCOLOR= 3
80 ROT= 0
90 FOR M = 1 TO 30
100 SCALE= M
110 DRAW 1 AT 140,80
120 NEXT M

```



For those that dislike typing.
Program listings are placed on a disk in the library
or can be downloaded from
The Force < or > BABBS 1.

Review

Certificate Maker

By Ewen Wannop

From the makers of Newsroom, we have an addition to their growing range of software. Like the former, this has a jokey feel to the whole package, using a particular kind of graphics that I am personally not fond of. However there is a serious side to the program that will find many uses. The entire and only purpose of the program is to make certificates of various kinds.

The program comes on two double sided protected discs, and is housed in a plastic book sized box, with a 72 page manual. The program is so easy to use, that in fact the manual is nearly all taken up with an index to the 220 templates provided. This is very necessary, as most of the four sides of the discs are filled with the templates. The templates range from the funny to the useful and serious, from the 'Mr. Know-It-All Award' to a range of Certificates suitable for school or club use. To fully use these templates, you can setup a 'Name' file to in effect mail-merge into the prepared certificate from a list of names.

The program is workmanlike, and is menu driven in the form of Newsroom or Printshop. You will be asked various questions as you proceed, allowing you to select from the 220 blank certificates. You then select from a range of 24 borders and 5 fonts the style you want. Depending on the blank you have chosen, you now enter the title and choose once again the font for the body text. Finally you enter any details for a 'Date' line and a 'Signature' line. The certificate is now printed out on a standard 11 * 8 sheet of paper.

Many printers are supported, many I have not even heard of. An editor is provided to build and service the Name files, and finally 36 coloured stickers are provided to give the certificate that individual look.

This is a workmanlike program which is ideal for school or club use.

Certificate Maker requires a 64K II+ or a //e or //c.

Review Copy supplied by: MGA MicroSystems,
140 High Street, Tenterden, Kent TN30 6HT. Price £44.99

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not apply to paper which we do not ship overseas.

ELITE

By NEIL GLEDHILL of MIDAPPLE



About a month ago I was asked if I would review the game "Elite" which had recently been translated onto the Apple II series by Firebird Licencees Inc., a division of British Telecom. I thought "Well OK, this shouldn't be too difficult."

I've played this game before on both BBC and Spectrum. So I agreed to do the article and was given a black box measuring about 9 x 6 x 1" emblazoned with the Glorious Golden Elite Logo. On close examination the box contained a disk, a space trader's flight training manual, a short novel, a quick control key reference card and several other bits of paper.

A brief reading of the manual introduces a new player to the game. Put simply, the idea of the game is to make money and become competent in combat by trading between the 250 planets in each of the 8 galaxies in the Galactic Co-operative, or by other means.

A new player starts his or her trading life with a Cora mk.III trading/combat craft with 20 tonnes of cargo space, a single front laser (the Cobra can carry four), 7.0 light years of fuel, 100 credits, a clean legal record and a rating of "Harmless".

Control of the craft is via the keyboard, but a joystick can be used for directional control (I would recommend the use of a joystick in combat). Most keys on the keyboard are used.

The player's rating is, as the manual says, a dispassionate assessment of the player's performance in combat. Ratings progress from Harmless to Mostly Harmless, Poor, Average, Above Average, Competent, Dangerous, Deadly and finally to Elite (hence the game's title). The number of "kills" that have to be made to progress through ratings increases with the ratings, so although it may be easy to go from harmless to mostly harmless, it becomes more difficult to move up after this.

As I mentioned earlier legal trade is not the only way of making money. It is certainly not the quickest way of procuring cash. As well as trade (which means goods have to be paid for!) players can resort to bounty hunting i.e. killing pirates (who can be distinguished from harmless traders because they shoot at you!) as a bounty is paid for every "baddie" killed.

Piracy itself is also very profitable because if you own a Fuel Scoop (a device for picking up bits of debris from space) you can kill innocent traders and collect the cargo from the wreckage of their ship. This pastime can quickly change your legal record from "clean" to "fugitive" (which simply means that you are permanently chased by the Galactic Police).

Trading takes place among space stations orbiting around planets. Each planet falls into one of eight political backgrounds. This determines the relative safety of their airspace (i.e. the number of pirates likely to be present when approaching the planet). In order of safety these governments are: Corporate States, Democracies, Confederacies, Communist States, Dictatorships, Multi-govt., Feudal Worlds and Anarchies. Each planet is either industrial or agricultural. Information on the planet's economic background is given by

its gross productivity. Each planet also has a Tech-level which shows how technologically advanced that world is.

These factors work together to set which products the planet produces, which it needs, and the prices of these products. Some information is also given on the planet's background, but often this is of no use at all. The planet Arexe, for example, is "fabled for its sit-coms and its inhabitants ancient loathing for sit-coms." These space stations also sell vital fuel and equipment for your Cobra mk.III - equipment such as extra lasers, missiles for use against other ships, ECM systems for use against missiles, escape pods for use in high-risk on-going death situations, fuel scoops (for use as I said earlier, or to skim the outer layer of a planet's sun to pick up fuel), cargo bay extensions (updates your ships capability from 20 to 35 tonnes) and other bits and pieces.

The display shows a cockpit view from the spaceship with all flight instruments in the bottom quarter of the screen. On the left are the front and rear shield indicators, fuel level, cabin temperature (used when collecting fuel from the sun), laser temperature and altitude above planets. To the right are the speed indicator, roll and dive and energy indicators. In the middle of these is the 3-D radar display. This ingenious instrument shows clearly (and at a glance) the positions relative to your ship of other ships, asteroids, cargo canisters and space stations. In one corner of this is the compass which is useful in finding both planets and space stations.

The game can be played in either black and white or colour as there is a facility to convert red warning signals to red/white flashing signals. The main cockpit display can be switched to look forward, backward and to left or right (useful when approaching a space station or looking for baddies during combat). This display is mostly in black and white although suns are shown in red. To give an idea of movement dots radiate from the centre of the screen. These are not stars but bits of dust and debris. These are helpful when manoeuvring the spaceship as they give points of reference for judging angles of roll.

There are facilities to save and load positions. This feature can only be used when docked. Without this facility one could not expect to get very far in the game. I found that I started to save the game at every space station because when transporting large amounts of valuable cargo attack from pirates can happen at any time. The Galactic Police (who will defend any trader being attacked in their space stations safe zone) cannot always be relied upon on low tech level planets.

There are 19 different kinds of space craft. These are represented in wire-frame on screen with hidden line removal. Considering the complexity of some of the shapes they move very quickly on screen. The display does, however, slow down when there are a lot of spacecraft around.

The manual provided with the program is very good. It gives more than adequate information on all the aspects of the game and also makes quite interesting reading.

The only problem I found with Elite was that it was difficult to "get into" the game. As a beginner I found myself being destroyed very often which was very frustrating. The only way to get over this is practice as after a while you become used to the controls and even docking (which is perhaps the most difficult manoeuvre) seems relatively simple.

Although Elite is called a game, its complexity makes it more akin to being called a space trading/combat simulator. Experienced Elite combaters seem to think the program is not so much a game more a way of life.

Elite is available from: FIREBIRD LICENCEES INC
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 Only £550 or £720 including MacServe £10 P&P

dms 20SHD for the Apple][GS

The same disk as above. No Pre-Boot Disks, simply plug it into the Apple][GS SCSI interface for 20 MByte. Use on PRODOS or Pascal 1.3. Sold throughout the UK. There is no other to compare in price and performance. Only £550 £10 P&P

The Apple][GS SCSI Interface for the dms 20SHD SCSI Hard Disk. £65 £3 P&P

Barcodes read into the Macintosh - keep up with today's technology!



dms SABRU Barcode Reader with Mac Adaptor

This plugs into the Mac keyboard and allows all worldwide barcodes to be read into any software automatically, without modifications - Software such as Omnis, Excel, Jazz. It allows the Macintosh user to compete with the larger mainframes as barcodes are now appearing on most stock items.
 £500 including Wand £3 P&P

dms SEALER, the sealer for the dealer!

Ideal for all businesses. Use it to shrink wrap and professionally seal your products in polythene film. Roll of shrink film available separately.
 £169 including 1 Roll of 14" wide Film £15 P&P



Quik Circuit PCB design on the Macintosh computer, Multilayer and Plate Through. £525 £3 P&P
 Do not forget our full range of **RGB Colour Cards** which has been the standard for years.
dms C12 at £39 & **dms C30** at £69 for Apple II & //e. **Peacock** at £36 for Apple //c
 Other products include the **dms ROM/RAM Card** at £49 & **dms IO Card** at £32 £3 P&P

We stock the complete range of Apple Macintosh, Desk Top Publishing and Apple][GS equipment. We are the North's largest Apple only dealer and have been established since 1973. Why not pay us a visit as we are only 5 minutes off the M1 motorway. Contact our Sales Department who will be pleased to discuss your requirements.



PAYMENT BY CHEQUE OR ACCESS

Please add the appropriate P&P * All prices are plus VAT for UK orders * Send SAE for Further Details

DMS Electronics Ltd

Bretton Court, Manor Road, Wales Village,
 Sheffield, S31 8PD, England.
 Telephone: Workson (0909) 773399



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 &
 Sheffield Chamber
 of Commerce

OMNIS NEWS

New Technical Support Services Announced

For this issue we have decided to update on the range of software and services which are available to our users. Please do remember, whenever you change or upgrade your hardware, you can do the same with the Omnis programme that you are using. The most important consideration is of course your data. All your data can also be transferred to the new hardware, by using the Omnis utility program. If you have any doubts on how this is done, talk to your dealer or give us a ring.

USER SERVICES

- Unlimited telephone technical support
- Program updates
- Omnis User News
- Technical notes with hints and tips on setting up and enhancing Omnis applications
- Access to our other business services

When you buy Omnis, you automatically become a member of an Exclusive Omnis Club. Buying the 'Rolls Royce' of databases means you also have a range of services available to you, such as those mentioned above which are FREE of charge.

Your membership (registration) card is supplied with the Omnis program and your membership number is the serial number shown on the Omnis system disk. Please make sure you have sent in your card and quote the serial number whenever you write or call us. This is the only means of ensuring that our services are available to the Club members only. If you are not certain of your registration, call Mandy Reekie and she will check for you.

The one year unlimited telephone support starts from the date of purchase. Whilst our invoicing system tells us when a dealer supplied you with the Omnis program, it is particularly important for you to send in the registration card within seven days of the date of purchase.

Existing users carry on receiving free support for one year or until 1st January 1987, whichever is the longer. For example, if you purchased your Omnis over a year ago, services are free until January 1987. From then on you can subscribe for a nominal fee of £35 per annum. To do this, simply write to us quoting your serial number and enclose the subscription fee. Acknowledgement will be sent to you confirming the free services available.

In situations where you need advice or assistance regarding the general database design or techniques in developing your turnkey systems, the Sales Office can help by recommending an Omnis Programmer or Specialist Dealer.

Technical Support Services

Library transfers i.e. Apple //e to IBM disk	
Installing Pascal 1.3 to boot disk	£10
Replacement boot disk (if due to user error)	£25
Enlarging Blyth ledgers (Apple II)	£25 each ledger

Blyth's Technical Support Team.

Our Technical Support Department help with technical queries which may occur from time to time. Sometimes it is simply impossible to respond immediately, supporting thousands of users is no easy task, but everyone does their best.

Pammie Merriot, the Technical Manager (designate), delegates the daily support tasks to her team. As well as handling the administration and correspondence, Pammie oversees the department ensuring the best possible services from Blyth Software for both dealers and end users.

David Winnup is a new member of the technical support team, currently working his way through the various Omnis programs. He is enthusiastic and keen to start answering your telephone queries.

Simon Cole. Simon's role in technical support is to encourage dealers to become more involved in customising Omnis. Simon sees his role within the company as being one of a "Good Samaritan". When users phone him in desperation tearing their hair out because they cannot solve a problem, they usually end their conversation satisfied, with all their problems behind them. In addition to being a good samaritan, Simon has been involved in preparing documentation, training courses and trade shows and exhibitions.

Peter Flisk. Peter is one of Blyth Software's longest serving members of staff. Peter also sorts out users' problems by telephone and written communication. He is also involved in the testing of new hardware and assisting with testing and development of new software.

What is Multi-user?

A multi-user program allows simultaneous access by more than one person to a database. The key element in Omnis multi-user is the aspect of sharing with top security built in.

Obviously when two people require access to the same information, they must be careful that the data remains valid. Therefore Omnis only allows one user at a time to change a certain record. Other users must wait until the update is completed before they can view the result. Data which is not being edited is still accessible by any other user on the system.

Omnis has nine levels of passwords, which means that the person who creates the system has total control over which members of staff are able to access any part of the program.

Omnis 3 Plus and MacServe™

This special development allows users to invest in a multi user system at a lower cost than what has been possible. You can now do this by using a hard disk (Macintosh compatible) as a file server.

In order to share the hard disk, communications software is required. This is where MacServe™ is being used by Omnis 3 Plus.

Blyth Software and Infosphere, the manufacturers of MacServe™, have combined their knowledge to produce the Omnis 3 Plus - MacServe™ multi-user system.

Shared volumes on MacServe™ are normally locked. Since no changes are allowed, others can simultaneously use it without confusing their Macintoshes. Omnis 3 Plus - MacServe™ knows how to temporarily unlock a volume and then automatically replace the protection, thereby allowing a user to update the data whilst the volume is being shared. So what you get is up to five users accessing the same data file with Omnis 3Plus - MacServe™ for £995 plus V.A.T.

Upgrading from Apple II to Unidisk

A Unidisk is a 3.5" disk drive that an Apple II computer is able to read. In order to do this, the system disk should be sent back to Blyth to be upgraded to Pascal 1.3. for a cost of only £10 plus V.A.T.

BLYTH SOFTWARE PRODUCT PORTFOLIO

OMNIS 2		
(version 2.1)	Macintosh	£295
	Apple II Family	£145
OMNIS 3		
(version 3.10)	Apple II Family	£295
OMNIS 3 MULTI-USER		
(version 3.10)	Apple II Family	
	2-5 users	£590
	6-10 users	£885
	11-20 users	£1180
	21+ users	£1475
Networks: Corvus Omninet, SymBNet, ICE, Hal		
OMNIS 3 PLUS		
(version 3.23)	Macintosh	£445
OMNIS 3 PLUS MULTI-USER		
(version 3.23)	Macintosh	
	2-5 users	£890
	6-10 users	£1335
	11-20 users	£1780
	21+ users	£2225
Networks: 3COM, Hypernet, Corvus Omninet/Talk, SymbTalk, Sunol, ICE		
OMNIS ACCOUNTS		
(version 1.1)	Macintosh	
	Nominal Ledger	from £345
	Sales, Purchase, Invoicing & Stock	from £245

MAILMASTER

Omnis SIG Technical Support.

If you have any good tips - questions or unique uses for Omnis let us know by contacting Apple2000 Omnis SIG

**With thanks to Pammie and the
Support team at Blyth.**

Here are a few letters which are typical of the kinds of enquiry we receive every day at Blyth Technical Support :-

J.Hayes,
Cirencester.

I have linked a customer file and a transaction file to print a report. The transactions have been successfully linked to the correct customers name, but they are in the wrong date order on the report. I can not understand this, as I thought correct date ordering was automatic. We have spent some time recently entering up the details of transactions which took place before we bought Omnis 3; there were already details in the database of more recent work done for the same customers.

ANSWER : The sequence numbers which were assigned when the individual transaction data was entered i.e. when the entries were actually made, are out of date order. Initially, the solution seems to be to sort the transactions into date order before printing out the report, but as this involves a new sort before each report, here is a permanent solution.

1. Index the date field.
2. Re-organise the data.
3. Go to Utilities.
4. Perform a Dif export using a search format for a date greater than 0.
5. Go to Data File management in Utilities.
6. Delete the file from the data set.
7. Perform an input from the Dif file.

June Wright
Milton Keynes.

I have used the invoice example on your examples disc, as a basis for my own invoices. When the invoice entry is greater than the unscrolled page, the final total does not appear in the total box on the screen. It is the total of only those items on the first page. The final total does appear when going back to edit, but not when inspecting an invoice.

ANSWER : In the example, the total is calculated only on the screen, and reflects just what is on the screen. To remedy this, a further command needs to be inserted in the sequence for 'Load items'.

1. Go to sequence 49 - 'Load Items'
2. Insert
Calculate #2 as #1*Insell (2dps)
so that the 8th to 10th lines of the sequence read :-
Calculate #1 as ITQNTY (0dps)
Calculate #2 as #1*Insell (2dps)
Calculate #3 as ITSEQN (0dps)

P Mainwaring,
Runcorn,
Cheshire.

I have had to rename my image-writer, used in conjunction with a Mac+, serial writer, to provide a solution to some printing problems since I upgraded to Omnis 3 plus. Now I am getting a \$ sign instead of a £ sign. What can I do ?

ANSWER : As a short term solution to this problem, the control characters which represent the required sign can be written in to the field description before printing. They are entered into the entry layout for the report. These can be found in the manual for your printer.

G. Porter
Edinburgh

In a multi-user system, I get a " Too many users " message on the screen even when only one work station is being used. What can I do about this ?

ANSWER: If you are certain that the message does not occur because there are too many users, then deleting Workfile 999 in the Library Utilities seems to be the answer. Be sure that all users except the one doing the deletion have logged off.

LOCAL GROUP CONTACTS

This list is compiled by Tom Wright - Please notify him of any errors.
Are your local group details here ? - If not contact Tom and let him know.

Updated 5th January 1987

APPLE II PROGRAMMERS CLUB

CONTACT - Phillip Dixon Tel : (0434) 446231
VENUE - None yet
MEETS - No venue - operates through postal newsletter.

BENTWATERS APPLE USER GROUP

CONTACT - John Thomas Tel : (01944) 771244
VENUE - R.A.F. Woodbridge
MEETS - 7.00pm first Tuesday of each month

BRISTOL GROUP (B.A.U.D)

CONTACT - MIKE FARMER Tel : 0272-651076
VENUE - Bristol Maternity Hospital
MEETS - 7th day of each month, or the Friday nearest.

CAMBRIDGE APPLE USERS GROUP

CONTACT - Ian Archibald Tel : (0223) 351177
VENUE - Lloyd Room, Christ's College, Cambridge
MEETS - Fortnightly

CROYDON APPLE USERS GROUP

CONTACT - Graham Attwood Tel : 01-850-5622 BSG008
VENUE - 515, Limpsfield Road, Warlingham, Surrey
MEETS - 7.30pm on the third Thursday of every month

EAST MIDLANDS MAC USER GROUP

CONTACT - Nick Helm Tel : (0533) 317775
VENUE - Wilford Cricket & Rugby Club, Nottingham
MEETS - 8.00pm on the 1st & 3rd Wednesday each month.

EDINBURGH GROUP

CONTACT - Adam Gilinsky Tel : (031) 2766124
VENUE - Proteus Micro Systems, 55, Frederick Street, Edinburgh, EH2 1LH
MEETS - Monthly after that. Check with Adam.

ESSEX GROUP

CONTACT - Pat Bermingham Tel : (0206) 3411234
VENUE - The Y.M.C.A., Victoria Road, Chelmsford
MEETS - Third Friday of every month

FURNESS AREA

CONTACT - Alan Curtiss Tel : 0229-56110
Check with Alan for future meetings.

GATEWAY COMPUTER CLUB

CONTACT - Robert D Hall Tel : (0338) 717723
VENUE - Bob Hope Recreation Centre, R.A.F Mildenhall
MEETS - Variable. CHECK with Bob for time & date.

GLASGOW GROUP

CONTACT - Donald Davidson Tel : (041) 4776133
VENUE - Proteus Micro Systems, 17, Park Circus Place, Glasgow
MEETS - Three or four times per year, CHECK with Donald

HANTS & BERKS

CONTACT - Mike Hollyfield Tel : (0753) 741234
VENUE - Thames Valley Systems, 128 High Street, Maidenhead.
MEETS - 7.00pm on the second Monday of every month

HARROGATE AREA

CONTACT - Peter Sutton Tel : (0434) 447423
No active organised group in this area but there are a number of keen Apple users in contact with each other.

HERTS & BEDS GROUP

CONTACT - Norah Arnold Tel : (0494) 577444 BSG009
VENUE - The Old School, 1, Branch Road, Park Street Village, St Albans, Herts.
MEETS - 8.00pm on the first Tuesday of each month

KENT GROUP

CONTACT - Richard Daniels Tel : 0303-58349
VENUE - AppleCentre 5-11 London Road, Maidstone.
MEETS - 7.30 p.m. Last Monday of each Month

LEICESTER GROUP

CONTACT - Bob Bown Tel : (0533) 477775
VENUE - Shakespeare Pub, Braunstone Lane, Leicester
MEETS - 7.30pm to 10.0pm on 1st Wednesday of month

LIVERPOOL GROUP

CONTACT - Irene Flaxman Tel : (0151) 434-3333 BSG021
VENUE - 78, Victoria Road, Widness, Cheshire, WA8 7AR
MEETS - Second Monday of every month.

LONDON APPLE II GROUP

CONTACT - Chris Williams Tel : (01) 499-4999
VENUE - St Brides Institute
MEETS - Check with Chris

LONDON MACINTOSH GROUP

CONTACT - Maureen de Saxe Tel : (01) 477-4777
VENUE - Room 683, London University Institute of Education, Bedford Way, London, WC1
MEETS - 6.00pm on the second Tuesday of every month.

MACINTOSH USER GROUP

CONTACT - Patrick Winterson Tel : (0223) 334444
VENUE - Cambridge Area.
MEETS - Every three months. Check with Patrick.

MIDAPPLE

CONTACT - Tom Wright Tel : (0203) 714113 BSG019
VENUE - I.T.E.C., Tildasley Street, West Bromwich.
MEETS - 7.00pm on the second Friday of every month

THE MIDLAND MAC GROUP

CONTACT - Ivan Knezovich Tel : (0522) 417444 BSG014
VENUE - Spring Grove House, Safari Park, Bewdley.
MEETS - 7.00pm on the first Tuesday of every month

THE NORTH WEST APPLE COMPUTER CLUB

CONTACT - Jim Rosco Tel : (0525) 341111
VENUE - Horse & Jockey Pub., Winwick Road, Warrington
MEETS - First Monday of every month

THE NORTH WEST APPLE USERS GROUP

CONTACT - Max Parrot Tel : (061) 276-3333, (061) 347777
daytime : 061-432-3487 evenings
VENUE - Staff House (2nd floor), University of Manchester - Institute of Science & Technology, P.O Box 88, Sackville Street, Manchester
MEETS - 8.00pm on the last Thursday of each month.

MACTAFF - S.WALES MAC GROUP

CONTACT - Lorrain Thornback Tel : (0492) 447444
VENUE - AppleCentre, 47 Newport Road, Cardiff.
MEETS - 7.00pm on the 1st Thursday of each month.

Mr J. Hardcastle,
Lytham St Annes,
Lancs.

When I copy data files from one hard disc to another, I can't reset the sequence numbers when I put the records back in. The sequence numbers just increase by the number of records used before. What can I do about this?

ANSWER : Each record is given a record sequencing number when it is inserted into the file. The number is unique to that record, and will never be re-assigned during the life of that particular data file. To get round this, use your Dif files to take the data out and put it back in. Remember, though, to create a new data file to take the re-inserted data, and to delete the old data file, after the data has been removed.

Mrs A. Joel,
London,
S.W.10.

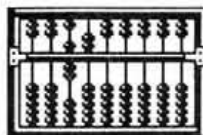
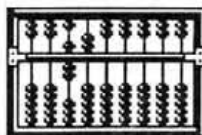
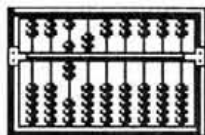
I have upgraded from Omnis 2 to Omnis 3 and I am really pleased with it so far. My only problem has been that, with Omnis 2, I frequently used the multiple update and multiple delete command and now, with Omnis 3, they are not provided.

ANSWER : Omnis 2 initially uses a search format, like Omnis 3, to pick out the records to be updated. Omnis 2 then has a multiple update format screen into which the user inserts the fields to be updated and the calculations to be applied. The user then asks for the update command window, and is prompted for confirmation before proceeding with the update. In Omnis 3, both the format screen and the command window have been superseded by steps which lie within the general Omnis system. Once the search format has been defined, the user writes his own multiple update sequence in the sequences window of the entry layout and creates the command button he needs, say **UPDATE** to perform the operation.

David Union,
Lanarkshire.

We would like to have a "summary" print-out of just the totals of our main report. The trouble is, I can suppress all the visible records on the report by giving all the fields in the detail section the attribute 'invisible', but when I print out, I still get the full number of pages I would have done had I wanted a full report, the only difference being they are blank! I had thought that printing to screen would be the answer, but somebody still has to sit at the screen clicking on **NEXT PAGE**, and as the report runs to some hundred pages, it's just not practical.

ANSWER : If you set the repeat factor in Parameters to 1, you will get a full report printed, regardless of whether the records are visible or not. If you set the repeat factor to 0, as it effects only the information in the detail section, no records in the detail section will be printed. The result will be just headings and totals, which will be instantly accessible on the first page on the screen, and the first page from your printer.



IS YOUR EPSON PRINTER CARD A PROBLEM?

If you have an Epson 8132 printer card, you know that it won't work with AppleWorks, CP/M, Pascal, Ascii Express, etc. Don't despair:

The **ImageMaker EPROM** replaces the ROM chip on the Epson 8132 card to make it compatible with everything, and in addition gives your Epson card the graphics printing features of a Grappler Plus.

We also make **ImageMaker EPROMs** for the Super Serial and Cirtech (pre-Champion) Printer Cards, to add full graphics printing capabilities.

ImageMaker EPROM £25 + VAT

NOW MOUSEPAINT CAN PRINT TO ANY PRINTER!

When MousePaint's 'Print a File' leaves you few options, take a look at **MousePrintz**.

With **MousePrintz**, you can magnify, stretch, crop, invert, flip, rotate, and shade your MousePaint screen image to your own specifications, then print it on virtually any dot-matrix printer. What could be simpler?

MousePrintz is a straight-forward patch program, designed specifically to enhance MousePaint's limited printing facilities. **MousePrintz** is fully documented and supports the Apple //c and 128K //e.

If you've ever been disappointed with your MousePaint graphic printout, **MousePrintz** is your saving grace.

MousePrintz £25 + VAT

SCREENSNAPPER - TO PRINT THE GRAPHICS YOU CREATE

ScreenSnapper offers not only sophisticated text and graphics printing but adds new features to your Apple II+, //e and //c, that you would never have thought possible.

ScreenSnapper lets you interrupt your program, print the screen, and resume running the program. Intended primarily for use with your own Applesoft and machine code programs (or other unprotected software) running under DOS, **ScreenSnapper** is compatible with virtually all interface cards and dot-matrix printers, rendering the purchase of an expensive graphics printer card unnecessary. It includes all the screen-editing features of **MousePrintz**.

ScreenSnapper adds an extremely useful extension to Applesoft Basic that provides graphics programmers with a complete set of commands for double hi-res plotting plus additional commands which access the **ScreenSnapper** on-screen utilities.

ScreenSnapper £30 + VAT

DarkStar
SYSTEMS

DARKSTAR SYSTEMS Ltd.
78 Robin Hood Way
Greenford Mddx. UB6 7QW

Phone (01)-900 0104

MicroLink ID: MAG20297

NEW PRODUCTS FOR THE IIGS

There is a lot of activity by manufacturers of new products for the IIGS, and we should soon see these in the dealers' showrooms. Below I have compiled a list of the packages which are being promoted for sale. Many will not be available in the UK just yet but you will be informed of what is actually available as soon as the IIGS Product Selector is published.

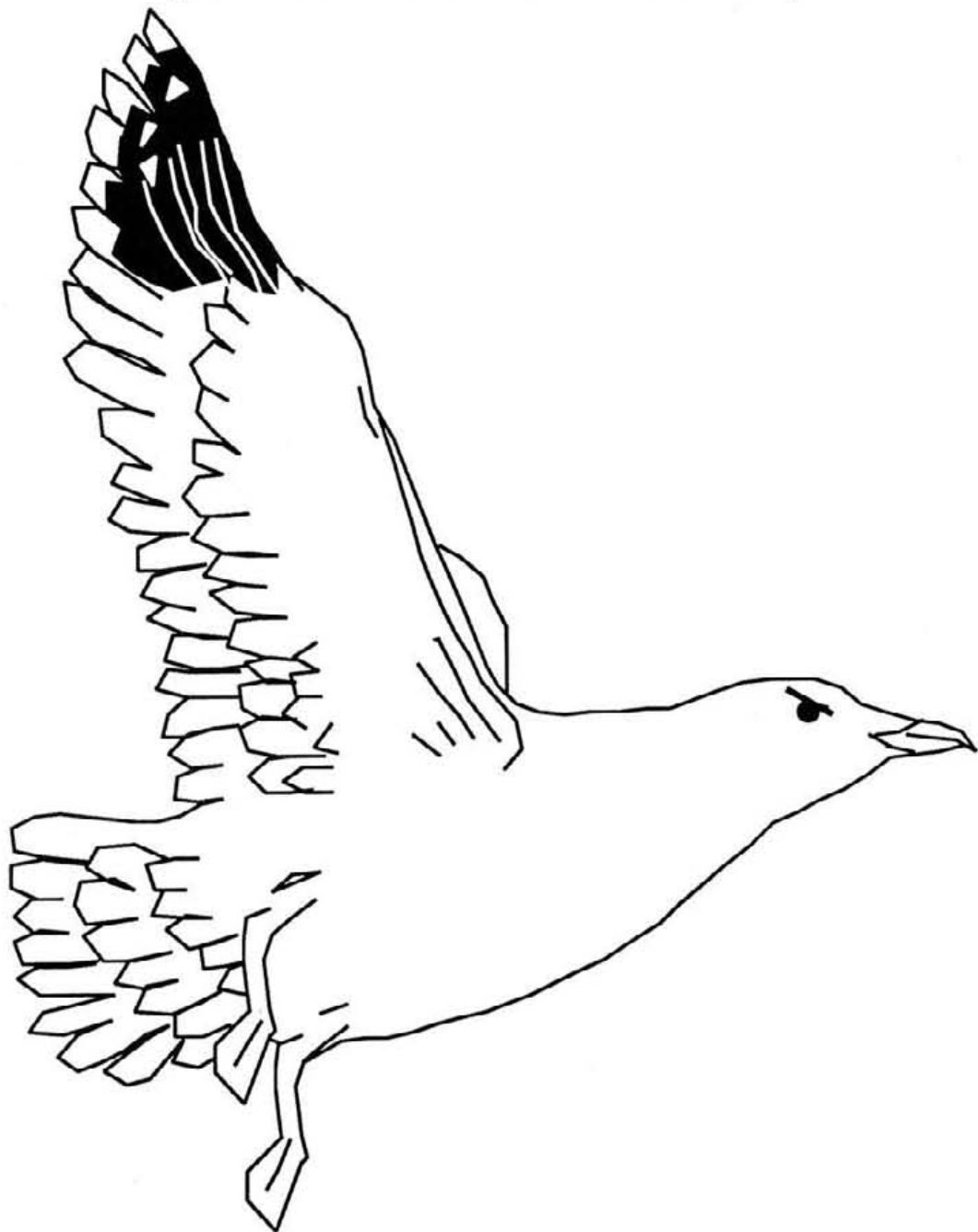
Graham Attwood.

Title	Publisher	Notes
E FirstShapes	First Byte, Inc.	Elementary geometry program
E KidTalk	First Byte, Inc.	Beginning creative-writing software
E MathTalk	First Byte, Inc.	Beginning math-skills software
E SpellerBee	First Byte, Inc.	Alphabet and spelling tutor
E KidsTime II	Great Wave Software	Typing and musical tutorial
E Explore-a-Story	Learningways, Inc.	Creative-writing software
E Silent Service	MicroProse, Inc.	Submarine simulation
E Conflict in Vietnam	MicroProse, Inc.	War gaming
E F15 Strike Eagle	MicroProse, Inc.	Flight simulation
E Nato Commander	MicroProse, Inc.	War gaming
E Talking Text Writer	Scholastic, Inc.	Creative-writing software
E Puppy Love	Tom Snyder Productions	Artificial intelligence simulation
H GS-RAM, GS-RAM Plus	Applied Engineering	1.5Mb and 6Mb RAM cards
H AST VisionPlus	AST Research, Inc.	Graphics digitiser
H AST-20Mb hard disk	AST Research, Inc.	SCSI hard disk drive
H RamStack	AST Research, Inc.	Memory expansion card.
H SprintDisk 1Mb	AST Research, Inc.	RAMdisk card
H Kurta Graphic System	Kurta	Digitising tablet (mouse alternative)
H Phoenix Board	MacNifty Central	Modular multi-functional card
H Conserver	MDIdeas	Monitor platform with surge suppressor
H OctoRam	MDIdeas	Memory expansion board
H SuperSonic	MDIdeas	Stereo board and amplifier board
H ProGrappler	Orange Micro, Inc.	Parallel printer interface
H RamPak 4GS	Orange Micro, Inc.	Ram card 512K to 4Mb
H Plus20	Peak Systems, Inc.	SCSI hard drive 20Mb and tape back-up.
H ProAPP10, ProAPP20	ProAPP, Inc.	SCSI hard drives 10/20Mb
H Echo IIb	Street Electronics	Speech synthesizer
S Music Studio	Activision, Inc.	Music composition and educational software
S PaintWorks Plus	Activision, Inc.	Colour graphics package like MacPaint.
S Writers Choice elite	Activision, Inc.	Wordprocessor like MacWrite with colour
S Bookkeeper II	Advanced Micro Products	Simple bookkeeping system for small business
S Appleworks V2.0	Apple Inc.	Updated version of the popular package
S Omnis 3	Blyth Software	Multi-File Data Base Management System
S Omnis2	Blyth Software	Data Base Management System
S Drawing Table	Broderbund Software	Graphics drawing program like MacDraw
S FantaVision	Broderbund Software	Combined graphics animation and sound
S NewsMaker	Broderbund Software	Desktop publishing and page layout
S Print Shop IIGS	Broderbund Software	Like old Print Shop but menu driven
S Copy II Plus	Central Point Software	Program back-up, and disk utility
S CSL Marks	Chancery Software	School grades marking program
S Rags to Riches	Chang Labs	Accounting package
S Deluxe Music Set	Electronic Arts, Inc.	Music composition, editing and playing package
S Deluxe Paint	Electronic Arts, Inc.	Painting program
S Beams Analysis	Lancashire Computing	Engineering Application
S Bill of Quantities	Lancashire Computing	Engineering Application
S Cashflow	Lancashire Computing	Business Application
S Drains analysis	Lancashire Computing	Engineering Application
S Managing Your Money	MECA	Personal-finance software
S PageWorks	MegaHaus, Inc.	Desktop publishing and page layout software
S Dollars and Sense	Monogram	Personal-finance software
S Color Paint	Orange Micro, Inc.	Painting program
S CommWorks 16	PBI Software, Inc.	Telecommunications
S Visualizer	PBI Software, Inc.	Business-graphics package
S DTP software	Quark, Inc.	Desktop publishing and page layout software
S Merlin 16	Roger Wagner Publishing	Assembler for 65816 processor
S MouseWrite	Roger Wagner Publishing	Wordprocessor using mouse
S SoftSwitch	Roger Wagner Publishing	Program like Mac's Switcher
S Sensible Grammar	Sensible Software, Inc.	Grammar checker for wordprocessors
S Sensible Speller	Sensible Software, Inc.	Spelling checker for wordprocessors
S 'draw program'	StyleWare, Inc.	Drawing program like MacDraw™
S MultiScribe GS	StyleWare, Inc.	Wordprocessor with colour text
S AutoWorks	The Software Touch	Enhancement for AppleWorks
S FontWorks	The Software Touch	Printing of AppleWorks files in choice of fonts
S TML Pascal	TML Systems, Inc.	IIGS version of TML Pascal for Mac
S ASCII Express MouseTalk	United Software	Extensive Telecommunications package.
S VIP Professional	VIP Technologies, Inc.	Mouse driven Lotus 1-2-3 look-alike

Key: E = Entertainment H = Hardware S = Software

WHY IS THERE A PICTURE OF A GULL IN THIS AD?

FIRST CORRECT ANSWER WINS A PRIZE
(ANSWERS ON A POST CARD PLEASE)



Celtip
computers

Campion House, Franchise Street,
Kidderminster, Worcs, DY11 6RE

Tel:(0562) 744377, One to One Mailbox 15014001

HOT LINE NEWS

Dave Ward - 0689 93 2192

During the last 12 months (my first year) we have received some 234 enquiries from about 180 members; it has been pleasant chatting to you all. I have been able to answer about 40% of enquiries directly but have found it necessary to pass the other enquiries to other HOTLINE volunteers. With such a diversity of questions it is impossible for one person to be able to answer them all and fortunately a few members have offered their assistance. May I take this opportunity to thank them all - even if I have not passed any enquiries their way.

If any members reading this article feel they are able to assist in answering HOTLINE problems will they please get in touch - either with Tom Wright or myself. The HOTLINE is at present voluntary and is therefore only available between 1900 and 2100 hours on weekdays.

If you have contacted us and we were, for any reason unable to solve your problem completely please let us know, as we want to do our best to help. Naturally we may from time to time make inadvertent slips - so do tell us if we failed to give the advice we promised. Some problems may not be solvable and if so we'll try to tell you.

Here are some of the enquiries that we have had during the last few months:

1} Many old programs such as VisiCalc and PFS do not work properly on the Apple //c or Apple //e enhanced computers due to inverse characters appearing as 'gibberish'. This is due to the software authors having not followed the Apple rules and inverse characters appear as mouse characters. For most commercial programs this is not user solvable and the updated version of the program will have to be obtained. For BASIC programs make sure that you switch off the mouse characters with a chr\$(24) before printing inverse characters.

2} Apple disk II drives have a ribbon connector to the card and so cannot be used directly with an Apple //c computer which uses a DB19 connector. This problem will also apply to purchasers of the Apple IIGS who have these drives. MGA Microsystems of Tenterden, Kent supply an adaptor.

3} What happens if you download text files say that are too large to fit on your AppleWorks desktop? Well you could get somebody with a large enough desktop to split it into manageable chunks. The other way is to BLOAD sections of the textfile in Applesoft under ProDOS. This 'margin' is too small to contain the description of the method but anyone interested should contact me.

II GS HOTLINERS

With the recent introduction of the Apple IIGS I am sure that many members will be purchasing one during 1987 and with good reason. I would like to make a few comments regarding the GS - the first is rather frivolous, but the rest are serious.

1} I can assure you that an Apple IIGS will fit down a chimney!

2} Owners of Apple //e computers who purchase the Apple IIGS may find difficulty in using the control + open-apple + reset key sequence to do a cold boot. It is important to hold down the open-apple + control keys with the fingers of the left hand and then press and release the reset key, but let your fingers tarry on the other keys. This is mentioned in the prolix manuals and was pointed out by Graham Attwood in his recent review.

3} When you wanted to enter Applesoft on the Apple //e and Apple //c computers you simply pressed the aforementioned Reset sequence followed by smartly pressing the control + reset keys. If you try that on the Apple IIGS you will restart the reset cycle and you won't get into Applesoft before the 10 year battery runs out. Here's how:

After pressing the reset key sequence wait until the BOOT disk light comes on or you are politely informed that there is no device connected! • Then and only then, press control + reset.

4} An interesting point about the Apple IIGS is that its super high resolution graphics mode has a palette of 256 colours with 16 shades making the total of 4096! Therefore, monochrome users will get grey shading without the loss of resolution that Macintosh users or older Apples got.

5} Applesoft on the Apple IIGS will not at present be able to make use of the extra memory or super high resolution graphics. No doubt some third party software house will take care of that problem. 🍏

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BOOKKEEPER II

By Graham Attwood

Bookkeeper II is the answer to the small business' perpetual problem of trying to keep track of the company's accounts. It is designed to run on the Apple II machines and has been launched to coincide with the introduction of the IIGS, to which it is very suited.

The program is supplied on both 5.25" and 3.5" disks and comes with a comprehensive operators' manual. You need to have at least a rudimentary idea of simple cash book accounting to run any accounts system, but once you have grasped the basic principles this program is easy to get on with. It does not pretend to be a full accounting package but it will take care of Cash and Bank accounts and will monitor Purchase and Sales control accounts so that debtors and creditors can be seen at a glance.

The first job you must do after reading the manual and running through the tutorial example is to make yourself a plan of the cash movements within your business. Work out how many ways cash is received; how you pay suppliers, or pay for services; how many bank accounts are used. From this plan you can then set up the right number and type of Sales, Purchase, Control and Bank account numbers in the program so that accounts are arranged in sensible groupings.

All references to these accounts are made by account number so it is as well to get them right from the start, and it will make it easier to put transactions into the correct account if they are logically arranged. There are up to 1000 accounts available which you can designate how you like within the limits of 7 - 99 for cash, 100 - 499 for sales and income, and 500 - 999 for purchases and outgoing. Within the cash accounts, 1 to 6 are preset to Petty cash, Bank, Sales control, Purchase control, VAT, and Brought Forward.

A useful addition is the ability to handle up to 30 Standing Orders, and the program prompts you when you boot up if a payment is due so that the transaction can be entered.

Having set up the account numbers you can first enter any opening balance figures you may have, and then run a Period End to put them into a Brought Forward balance. The system is now ready for the day-to-day transactions to be entered. Cash figures are automatically converted to two decimal places on entry. As a check on your progress, the previous transaction is displayed in summary form on the bottom two lines of the screen.

At its simplest you can use the program just as a Cash

Book, entering cash in and out to the Bank and Petty cash accounts. Used fully it produces Trial Balance report to keep a check on your profitability, and gives a detailed VAT report which is essential for filling in the VAT returns. All reports can be viewed on the screen as well as output to the printer.

Transactions are entered against particular accounts (you need that account number list), specifying where the money is to go to, or to come from. The amount can be Nett plus a standard VAT rate, or the Total can be entered and the computer back-calculates Nett and VAT for you.

The only limitation on the amount of data that can be stored is the size of the data disk, and this determines how often you have to run a Period End report. This report consolidates all the 'live' data into a Brought Forward balance situation, and then clears down the files freeing-up space for the next Period. All historical detail is lost at this point, so it is a good idea to run off a hard copy report just prior to the period end. If you have enough space, say on a hard disk drive, you could leave

PURCHASE AND OUTGOING ENTRIES

Account the entry is going to - (500-999) : 500

PURCHASES Balance: 0.00

Date : 12.12.86 Folio/Ref No.: 1235

Description : Apple Goodies VAT Code : 1

Amount : 865.40 VAT : 129.81 Total : 995.21

Amount Paid : 995.21

Account the payment is coming from - (1) Petty Cash (2) Bank : 1

Details Correct Y/N : []

Last Transaction	10	Folio/Ref	Description	Account
		1234	Cash to Bank	678.00

the data active for 6 or 12 months, but on smaller systems it is probably better to work to a monthly accounting period.

A useful program - very easy to use and it will save hours of manual book-keeping for the small business user. I would recommend it.

Bookkeeper was loaned for review by Advanced Micro Products, 200 Court Road, Eltham, London SE9.

NEWS from APPLE (UK)

As announced at the recent User Group Council.

APPLE DEVELOPERS GROUP (ADG)

Those of you who are involved in serious programming and software development on Apple computers (Mac and Apple II) will have access to a single centralised source of technical data in the UK.

In the USA there has been in existence for some time the Apple Programmer's and Developer's Association (APDA) which is an independent company set up by Apple, Inc. to handle all aspects of technical support for writers of Apple Software.

To meet the needs of the UK, particularly with the new open-architecture machines in mind, Apple (UK) have formed the Apple Developers Group (ADG) to provide a service to the serious developer, which will operate in a similar way to APDA.

They will make available a range of tools, technical notes, manual drafts and Beta test versions of Apple languages, and these will be listed in a quarterly newsletter. Developers can purchase items at reasonable prices and will be advised of updates and revisions from time to time. This is not, however, a cheap source of new programs; they will be supplied 'as is' complete with known (and unknown bugs) and are provided so that programmers can test the interfacing and compatibility with their own software.

There are two levels of service:

SUBSCRIBER

Subscribers receive the newsletter and can purchase items, but get no direct technical support. This is seen as the small developer and end user area of the scheme. It will ensure that the wealth of material coming from the USA will be available quicker than at present.

Annual subscriptions are likely to be about £30 for Subscribers although the exact cost is not known just yet.

REGISTERED MEMBER

Registered Members have, in addition, access to a hotline, a bulletin board, and a technical help service is available. This is the area where serious developers and large companies will be involved, the cost is expected to be SUBSTANTIAL.

All contact with ADG at present will be through:
Chris Calvert (Macintosh Product Manager)
Apple (UK) Ltd.
Eastman Way, Hemel Hempstead.

Please **WRITE** if you want more information on ADG.
DO NOT PHONE Chris as you will be disappointed !



Lisa - Macintosh Migration

Those members who have the Lisa and wish to migrate along the Macintosh path, should note that the software and manuals are available from Apple (UK).

To obtain this software you must apply in writing to the Technical Support Department at Apple (UK) and enclose three diskettes. 🍏

Pixel Fix for Lisa

Limited supplies of the screen modification kits (Pixel Fix) will shortly be available from your local Apple Dealer. This kit is not manufactured now, so you should order one quickly. 🍏

LisaTalk Report

The quarterly U.S. Report entitled 'LisaTalk' is being distributed in the United Kingdom by MacEurope. The annual subscription rate is £32.00 and you should write to:

Stefan Youngs, MacEurope, 9a Lynce Court, Church Lane, London NW9. Tel 01-200-3981 🍏

Apple (UK) Customer Bulletin Board

During the coming year Apple (UK) will be launching a customer bulletin board in the United Kingdom. The exact format is not yet finalised.

Some of the things planned are:

It will have 16 lines and will operate at local call charges. COMPUSERVE download files area, Third Party product information, Apple Technical Information and User Group Communications with Apple Management.

Further details will be announced in the next few months. 🍏

AppleWorks Version 2.0

Apple (UK) have announced that AppleWorks Users can upgrade to the new version for £50.00 + VAT.

The new version has many new features including a mailmerge facility, GS Compatability and support of large memory cards. It is not mouse driven at present.

If you wish to upgrade. You will have to send the money and either the original Master Disk or the front cover of your old AppleWorks manual.

In return you will receive Version 2.0. with a new manual.

The upgrades are available from:
Copeland Sales,
Little Gaddesden,
Nr Berkhamstead,
HP4 1QL
Tel: 044284 2387

TRANSWARP

Your IIe can run faster than a GS - with TransWarp.

TransWarp is the accelerator which beats all others out of sight. With 256K of fast memory on board, TransWarp can accelerate auxiliary as well as motherboard memory which is why it runs 30% faster than other accelerators. And no problems with caching techniques.

Results of Byte magazine "sieve" benchmark, in seconds:

IIe - 245 secs; IBM-PC - 191 secs; Macintosh - 125 secs;
Mac Plus - 96 secs; IIGS - 96 secs; IBM-PCAT(6MHz)-80secs;
IIe + TransWarp - 80 secs.
Source: "Open-Apple" December 1986

Compatible with IIe/II+ only. Not GS compatible.

Price: £279.00 (ex Vat).

GS - RAM

GS-Ram (256K to 1.5 Meg) - fits GS memory slot

As well as adding extra memory (up to 1.5 Meg on 1 card) GS-Ram also increases AppleWorks 2.0 internal limits to over 25,000 records in the database and 25,000 lines in the word processor and to 2000 lines/records in the clipboard. Also displays time and date on the AppleWorks screen and gives automatic time/date entry into the database.

Also auto-loads AppleWorks for even faster operation; has a variable-size printer buffer, and auto-segments large files so they can be saved on two or more disks.

GS-RAM is not the cheapest memory card for the GS but it does much, much more than ANY other card. PLUS reliability is assured as it's from the makers of the world beating RamWorks and Z-RAM.

A 1 Meg GS-RAM or larger includes free Pinpoint 2.0.

Prices: (ex Vat)

256K £169.00
512K £219.00
1 Meg £299.00 - Includes free Pinpoint 2.0
1.5 Meg £379.00 - Includes free Pinpoint 2.0

GS-Ram Plus (1 Meg to 8 Meg) - fits GS memory slot

Enhancements as GS-Ram. Up to 8 Meg on main card + 2 Meg Piggy-back for full 10 Meg. Uses 1 Meg Ram Chips which are still very expensive, but will become cheaper. CALL for latest pricing.

PINPOINT 2.0

This new enhanced version of Pinpoint, Pinpoint 2.0, works on the new Apple IIGS and works with Version 2.0 of AppleWorks. Pinpoint 2.0 can also be integrated into AppleWriter as well as AppleWorks, BASIC and other selected ProDos programs. Pinpoint applications include Appointment Diary and Calendar, Calculator, CommunicationsWindow, GraphMerge, Notepad, QuickLabel and Typewriter. Other integrated applications such as SpellingChecker, Macros (Keyplayer) or programmers tools (Toolkit) can be added later.

Prices: (ex Vat)

Pinpoint 2.0: £89.00
Spelling Checker: £49.00
KeyPlayer Macros: £49.00
Toolkit (includes RunRun Desktop manager): £69.00
RunRun (Desktop Manager): £49.00

PRO-APP HARD DISKS

For ALL Apple Computers
GS/IIc/IIx/Mac/Mac+

Pro-App 20 Mb Hard-Disk (Also 10Mb)

The only hard-disk which plugs directly into the Smart port of the GS or the external disk drive port of a IIc or the back of a 3.5 inch disk drive - thus saving a valuable slot. (Can also be connected via the Apple SCSI interface). This disk drive is unique in that it fits the entire Apple range - even IIc. Styled to match the new Apple styling and supports Macintosh systems, ProDOS (inc. 8 & 16), Pascal 1.3 and Dos 3.3. This disk is used as the hard-disk for the UniShare network which links GS/IIc/IIx.

Prices: (ex Vat): 20 Mb: £995.00
10 Mb: £795.00

Compatibility: IIGS/IIc/IIx/Mac/Mac+

Pro-App 40 Mb Hard-Disk

Fast SCSI drive. (Sub 30 msec. avg access time)

Daisy-chain up to 280 Mb.

Compatibility: GS/Mac Plus/IIc (Note: GS and IIc need SCSI card)

Price (ex Vat): £1795.00

Note: Tape-streamer for Pro-App available February.

VIP - Professional

This amazing program must vie with AppleWorks for the title of "Best program ever for the Apple II series"

VIP Professional is a super-powerful spreadsheet, database & graphics program.

VIP Professional is a Lotus 1-2-3 clone which adds a full Mac-style interface and colour and runs on the IIe and IIcx Unbelievable but true! (Separate version available for IIGS.)

VIP Professional provides up to 8192 rows and 256 columns and requires at least 256K of Ram (RamWorks or Z-Ram), (512K on GS), and can directly address up to 4 Mags.

VIP Professional has all the functions and power of Lotus 1-2-3 and can even use Lotus macros, templates and worksheets. (Transfer via a Comms program).

Prices: (ex Vat)

VIP Professional- IIe/c: £219.00

VIP Professional- GS: £279.00

(Also available "bundled" with GS-Ram, RamWorks and Z-RAM)

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Swyftware

A Review

By Roger Larcombe.

Swyftware is an operating system and an environment for text processing where a large amount of data resides in memory at one time and can be easily accessed by moving around within it. Although the manuals describe it as an information retrieval system, this is not strictly true as all data is held in memory as text and the program simply allows easy finding of target strings within it. This is done by 'leaping' or 'creeping' around the text using the special keys.

The system comes as a card for the Apple IIe to go in slot 3 or on a disk for apple IIe or IIc, it is not known whether it will run on a IIgs at this time. If you have an apple IIe and don't want to buy the card you can use the Swyftdisk provided you have an extended 80 column board.

The package requires you to adopt new meanings for some keys, e.g. open and closed apples, escape, tab control and some letter keys and for this reason comes complete with a set of neat and professional stickers for fixing on the front of your existing keys so that you can easily identify the special functions for moving around the text and performing commands etc.

First experiences with Swyftware are in the familiar tutorial method now adopted by most software houses. The tutorial is disk based and there is an accompanying brief introduction to this in the manual which stresses the fact that if you get into trouble you can easily switch off and re-boot.

The tutorial contains over 60 screens of information to teach you how to use the system and this is reinforced by detailed instructions of each and every idea in the manual itself, but I found the tutorial so good that I hardly used the manual until I got onto advanced printer setups. The tutorial shows very clearly how quickly a string of text can be found within a memory full of document(s), with a maximum search time of about 2 seconds !! In practice this is normally far less and appears to be instantaneous.

The open and closed Apple keys become the leap/creep reverse and forward keys respectively, when you press down one of these keys and simultaneously type a target string, the Swyftware searches for the next occurrence of the string and moves the cursor to it. This is known as leaping as you can leap through a whole memory full of information to find your target. Of course there may be many occurrences of some targets such as 'th', but as you type each character of the target the cursor jumps to the next exclusive match of the complete string typed so far, so the more target you enter the more likely you are to find the right occurrence.

There is also a leap again key which can be used to repeatedly search for a given target which occurs many times in the text. To browse through the text paragraph by paragraph you would initially search for a target of two returns, then you press leap forward and leap again and the cursor moves to the next pair of returns and so on. Similarly you can search through sentence by sentence by searching for full stops or word by word using space as the target.

The cursor has two parts, when text is typed it splits into an insert cursor (blinking checkerboard as per basic) and a high light (solid block), both move together when leaping and creeping, but as soon as text is typed they split with the highlight showing what will be deleted and the insert cursor showing where the next typed character will appear. These two states are called the narrow and wide cursors respectively, and deleting is carried out to the left when in wide cursor or to the right in narrow cursor. Fortunately the program determines which cursor and delete direction you are most likely to want at any time and sorts it out for you, however you can override this if you want. I actually found this rather confusing as I am so used to delete always working in one direction but to the novice it would probably be more logical and easily learned.

Blocks of text are easily highlighted for later use by one of the functions of the software by simply leaping to the first character required, then leap to the last character, then press both leap (Apple) keys at the same time. This causes the whole of the text in between to go to inverse display ready for use. This method can also be used to delete large chunks of text as pressing the delete key will now cause the whole block to be copied off the screen into a buffer area. The insert function can now be used to put the block somewhere else in the text or if you don't want it, then it will be lost when you next delete a block.

There are only a few commands with Swyftware, the leap and creep keys for cursor movement, and the control or use front keys. For some reason the control key was re-named 'use-front' and is used as we would know it in conjunction with other keys to invoke functions of the program. The five commands are;

Control L	-	Disk command.
Control A	-	Insert command.
Control D	-	Send command.
Control G	-	Calc command.
Control N	-	Print command.

Why those particular keys should have been chosen is beyond comprehension, but here goes for a quick explanation of each function.

The Disk command.

This semi-intelligent command, both saves and or restores text automatically, by determining what you have been doing. If you execute the command with no text in memory it loads the text from the current disk in the drive (if it is a Swyftware disk). If however you have been typing away entering text then it will save this text for you onto the disk in the drive. Of course you may have changed the disk since last saving or retrieving so the system checks the disk and if it's changed it pops up an error message to remind you of what you might be doing. If you save the current text then insert another disk and then execute the disk command again, it loads the new text since it knows the old was saved to the other disk.

The Insert command.

This command is to allow you to recopy into your text anything that has been deleted or picked up elsewhere like a paste command when moving around chunks of text. The process of block deleting actually carries out a copy to buffer operation, only when another delete operation is carried out does the buffer get wiped out. It is worth bearing in mind that you can only delete and then re-insert one block of text at a time.

The Send command.

This is intended primarily for sending data via communications links and modems although it is not really effective for use with online systems rather for sending documents to other Swyftware users, a minimal benefit to most users.

The Calc command.

Calc is undoubtedly the most useful command of all as it permits execution of various things such as calculations, variable allocations, printer setups and even running basic programs. It seems as though a basic interpreter is waiting in the background for us to use online. We can for instance type in; ? 2+5.7-1.82 now we highlight this block and execute the calc function (control G) and the answer pops up just as though you had typed it at the basic prompt. The calc command leaves our original sum in highlight so we can press delete once to erase it and leave the answer only, quite a useful function while word processing to just quickly calculate a simple or complex sum to save scratching around for the calculator or swapping programs.

In a similar way you can declare strings for use in documents and then simply recall them whenever required by calc'ing them back in. To do this we simply type B\$="when the party of the first part, parts with the party of the last part", then we highlight this block and execute the calc function (control-G), thus putting that text within the quotes into the variable B\$. The calc function leaves the declaration highlighted so we just press return to delete the whole block, now all we have to do is every time we want that string in our text is type ?B\$, highlight it and calc it, hey presto up pops the string, again the print statement which we calced is still highlighted so press delete again and it disappears leaving only the text we wanted.

There are many more things you can do with the calc function which include setting parameters by using reserved variable names e.g. W1% for print width in characters, or you can enter and calc (run) a basic program using all the benefits of Swyftware's editing and searching facilities plus many other things too numerous to mention here.

Summary

I found that sometimes the software seemed to ignore the key presses I was trying to make and this was rather disconcerting, as I was sure I was following the right format. This was particularly apparent when trying to change the wide cursor back to a narrow cursor for creeping. I personally found the split cursor confusing as when typing the insert part of the wide cursor is not present unless no key is pressed for about 1.5 seconds. I was continually typing characters one place away from where they should have been because of the two part cursor. I also thought that it would have been a good idea to

leave the old cursor movement keys active as a concession to those of us set in our ways.

The only other problem with Swyftware is the disk file format which appears to be special. I could not get a catalog or directory under either DOS 3.3 or ProDOS which seemed a shame. The package does come complete with a utility disk called ProDOS converter which will convert your files for use by Appleworks etc.

All in all I found Swyftware very good indeed and it's text searching and handling facilities are on a new plane compared to the word processing software many of us II users are on at the moment. The program will cost you from £80 to £100 depending upon where you buy it (shop around). I would recommend the system to anybody starting out on computers and word processing as it serves as a good guide as to just what can be done. 🍏

Kent Apple Group

7.30. p.m. Monday 23rd February 1987

Graphics - Demo by MicroSpot.

7.30. p.m. Monday 23rd March 1987

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POWER PRINT

A FONT DOWNLOADING PROGRAM

HARRY GARDINER

Power Print is Beagle Bros answer for the Apple II to the variety of fonts the Mac boasts. It also has pull-down menus, attractive screens, easy cursor movement and command selection. It is friendlier and faster but has fewer fonts than the DMP Utilities for the Epson FX printer I reviewed two issues ago.

It can be used with quite a wide selection of the dot-matrix printers that have memories to hold user-defined character sets downloaded from the Apple II. It is compatible with a lot of printer cards. Setting the program up for the card/printer combination is quite easy, provided your slotware or dotware is not of obscure origins. The program is CopyA, so there are no back-up problems. It runs under Prodos.

Loading a font is quite quick, and the program automatically picks the range of fonts appropriate to the printer you specify in the set-up. Thus it gave me access to nine fonts for the Epson FX printer. Each font character being on a 11 x 9 grid of dots. The Imagewriter version is for a 8 x 9 grid, and therefore has ten separate font sets.

The manual is adequate, though twenty of its pages are dedicated to explaining how to revitalise Appleworks' printer control commands. Clearly Beagle Bros see Appleworks users as their market target; if AW is not your WP, be not afraid, Power Print will work just as well, in fact better with Format-80 and the like, with full access to all those Epson print control commands.

Changing the font your printer uses is easy; load the Program disk, choose Load Font on the File menu, move the inverse bar to the font name you want on the list that pops up, hit return and it loads into the Micro. Then choose Download as Font 1 on the Printer menu, check your printer is on line, hit return and in seconds the font is resident in the printer.

You can then print a sample of the font. With Epson FX and some other printers you can repeat this process to have two fonts simultaneously in the printer's font memory AND you can switch between them.

Now you load your wordprocessor or spreadsheet; the Power Print manual details the control codes (for each of the printers it supports). You will need to access the fonts you have downloaded. You can also use all the printers other control codes on the fonts - superscript, condense, etc. You can swap between the standard font and the downloaded font on all printers, and on the Epson FX you can also swap to font 2. What you cannot do is swap between other fonts when you are using a wordprocessor. You have to reload Power Print and load the next font you require into the printer, reload your word processor and off you go again. Dark Star's 'multi-tasking' Snapshot card would come in handy for anyone who wanted to switch fonts a lot.

The Power Print manual gives details of how to modify characters on an existing font or indeed to create a new font. The font editor is easy to use, but it takes a long time to create all of the characters in a complete font set. Details are given how to replace letters or characters with graphics shapes, e.g. for border patterns or for logos, which can be made up of several graphics shapes, one for each key.

The main limitations on all this are clearly the time taken to create characters, and the fact that you cannot (as you can on the Mac) use more than a maximum of three character sets at once.

All in all this is a good piece of software, easy to use, flexible, robust, and fast. It does not turn the Apple II into a Mac but it does give users a lot of flexibility in the characters they can print. If what you want are some mathematical symbols, you can design them yourself. If you want a fullstop enlarged to look like a penguin, you can do that. If you want a graphic logo on your letterhead, within certain limits, you can.

It is a shame that all the font sets created by different software writers are not interchangeable; if you want a DMP font in Power Print you have to enter it one dot at a time!

So if what you want is varied fonts and you already have a II and an appropriate printer, you will find Power Print to be right up your street, a similarly successful combination of friendliness and usefulness to Broderbund's Print Shop. That's praise indeed from me!

Power Print costs £39.99 plus VAT and £1.50 p&p from
MGA MicroSystems,
140 High St., Tenterden, Kent.
Tel 05806 4278



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straight jacket and
opening up to all that
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used to wish for.....'

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why not drop us a line ?

Apple2000
Serving the Apple User

Apple /// Page(s)

First I must apologise for the omission of this article in the December issue - sorry I had it ready but due to pressure it got left out.

TAKING APART THE APPLE /// DEMONSTRATION PROGRAM OR TWO USEFUL PROGRAMS YOU CAN USE BY DAVID OTTALINI Washington Apple Pi

At the start, let me admit to all my Apple /// friends and users that I am not a programming whiz. Nor have I got that analytical ability to look at a problem in such a way that it can be boiled down to a 1000 line Business Basic program and work the first time (or even the second!).

What I do enjoy doing from time to time is fiddling. Fiddling with programs that are already out there to see if I can't adapt them to be more useful for my own specific purposes. Frankly, I find it to be kind of fun on occasion, although the frustration factor can be very high at times (there's always that single little bug that causes everything to hang like a wet noodle...).

One program I've found to be particularly interesting is the Apple /// System Demonstration program. If you haven't run it lately, you might want to fire it up to refresh your memory a bit. It's a great little program designed to show off some of the things the /// can do.

When booted, you are presented with a 'marquis border' (in color if you have a color monitor) within which is scrolling a choice of five different demonstrations. Among them is a program allowing you to reset the date and time, a graphics demonstration, and a demonstration of the type-ahead buffer.

After you have chosen one of the programs, it will run and then allow you to return to the main menu to try something else. My demo disk, by the way, was for the Apple ///+ and is listed as being version 2.2. I can't tell you what earlier versions looked like, but suspect there is little difference.

If you load the program into Business Basic and then list it, you will find a fairly compact program that provides decent documentation through the "REM" statements. The program is basically broken down into a number of easily identifiable sections (which is what made it easy for me to tear it apart).

Basically, the screen is set up, data for the demos is read in and then the "marquis border" is printed one space at a time. The program uses the 40 column, 16 color mode. The scroll subroutine is next followed by the subroutine that allows you to choose the demonstration you'd like to see run. At that point, the program is instructed to run the particular demonstration you have chosen (the demos themselves are

separate programs on the disk). Once the demonstration is run, you are given a choice of returning to the main menu or quitting.

There are two pieces within this program that intrigued me enough to do a little fiddling. I will now pass them along to you. The first is the "marquis border" program. The second is the scroll program. Each can be included as subroutines in other programs, perhaps as part of a "Hello" program, message board or other use. In any case, let's take a look at the "marquis border" program:

```
10 TEXT
15 LEFT=8:RIGHT=9:DOWN=10:UP=11
20 COLORS$=CHR$(19)+CHR$(15)+CHR$(20)+CHR$(1)
30 PRINT CHR$(16);"1";:REM SET 40-COLUMN, 16 COLOR
   MODE
35 PRINT CHR$(1);:REM SET VIEWPORT
40 PRINT COLORS$
45 HOME:VPOS=2:HPOS=2
50 PRINT CHR$(21);CHR$(0);:COLOR=5:REM ALL AUTO
   TEXT OPS OFF
55 FOR X=2 TO 38:GOSUB 200:PRINT CHR$(RIGHT);:NEXT
60 FOR Y=2 TO 22:GOSUB 200:PRINT CHR$(DOWN);:NEXT
65 FOR X=39 TO 3 STEP -1:GOSUB 200:PRINT CHR$(LEFT);
   :NEXT
70 FOR Y=23 TO 3 STEP -1:GOSUB 200:PRINT
   CHR$(UP);:NEXT
73 PRINT CHR$(21);CHR$(13);:REM STANDARD TEXT
   OPTIONS ON
75 PRINT COLORS$:WINDOW 4,4 TO 38,22
80 HOME:PRINT"THIS IS A GREAT APPLE /// BORDER"
85 GOTO 220
200 COLOR=COLOR+1:PRINT CHR$(20);CHR$(COLOR);" ";
210 RETURN
220 END
```

The subroutine at line 200 is what is actually used to print each colored square, beginning at screen location 2,2 and then moving right, down, left and up. The actual window within the border is set at line 75 and the heading is read in at line 80.

The program sets the 40 column, 16 color mode at line 30 while the screen is initialized at line 20. Since I only have a Monitor ///, I can not attest to what the border actually looks like in color. But I suspect it is "marvelous."

The second program taken from the demonstration is a simple scroller which I have adapted to let you insert any message you might want and have it move from bottom to top within an inversed window on the screen. Let's take a look:

```
5 HOME
6 INVERSE
10 DATA THIS PROGRAM SCROLLS
20 DATA FOR YOU AND CAN BE USED
30 DATA IN MANY APPLICATIONS. TRY IT!
35 DATA THIS IS ADAPTED FROM THE
37 DATA APPLE /// DEMO DISK.
39 DATA USE "RENUMBER" TO PLUG IT IN.
40 DATA <<END>>
42 NUMDEMOS=5:K1=2:K2=NUMDEMOS-K1
50 WINDOW 20,5 TO 60,18
55 SEEK=0
60 PRINT CHR$(9)
```

```

80 RESTORE:DEMO=1
90 READ A$:IF A$="<<END>>" THEN
  ROUNDS=ROUNDS+1:GOTO 80
95 IF ROUNDS>=5 THEN SEEK=1
100 PRINT DEMO" . ";A$
110 IF SEEK=1 THEN GOTO 300
120 IF SEEK=0 THEN FOR TIME=1 TO 300:NEXT TIME
130 PRINT
140 IF SEEK=0 THEN FOR TIME=1 TO 300:NEXT TIME
150 PRINT
160 DEMO=DEMO+1
170 GOTO 90
300 PRINT:PRINT:PRINT" **** STANDBY: HERE'S THE
  PROMPT!
305 FOR X=1 TO 1000:NEXT X
310 TEXT:NORMAL:HOME:END

```

The size of the window in this program is set at line 50. The program will scroll five times (it counts <<END>> five times to do that) and then prints the message located at line 300.

The message is held with a simple count-down subroutine at line 305 before returning you to Business Basic (I added that part). You can set the speed of the scroll at lines 120 and 140. The original program set time = 1 to 460, which was a little slow for this demonstration.

I think the best part of "fiddling" is that you can learn a bit about how a program is put together. That helps me understand Business Basic a little better. And sometimes the end result is something that is even useful!



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LOOK - NO HANDS

A breakthrough in technology for the disabled faces the problem of being recognised in the country where it was achieved.

Mervyn Evans - Director of the National Youth Initiative

In a saturated climate of information technology, where thousands of potential advances claim equal if not exclusive attention over their rivals, prospective supporters and sponsors are in a quandary. Endeavouring to discriminate the true quantum leap from pretentious steps in the dark presents both protogé and patron with a problem - how is it possible, for example, to convey effectively the real nature of achievement, in words at the outset, in order to attract more than a passing interest.

Roy Stringer, a mild mannered, unassuming computer man from Merseyside, knows he has the means to help even the most severely disabled regain a meaningful and dignified way of life. His company, BIT 32 Ltd., of Liverpool launched HEADSTART in February of last year and the Manpower Services Commission has just placed orders for two sets worth £15000. They are to go to a printer in Manchester and an Ordnance Survey draughtsman in Southampton. What the men have in common is a disablement which but for HEADSTART would have made it impossible to contemplate a resumption of work on a permanent basis.

A little over a year ago, the summer of Rebecca Owen, Stringer's sister-in law, came to a brutal and sudden end in a car crash which left her the only victim with a back broken like a stick. Through the course of her treatment first in Yeovil and then Stoke Mandeville, Stringer learned the extent of the despair encountered by para- and tetraplegics. In Stoke, Rebecca was surrounded by thirty of each type of spinal injury, of whom she can recall some forty-five; 75% of those were there as a result of road injuries; only nine of them were over 40 years of age and most were under twenty-two. Injuries, of all types, from road accidents claim over 300,000 people each year and 43,000 of those are children.

Although it is understood that the Government in conjunction with W.H.O. is now compiling figures on the numbers and types of disablement in Great Britain, there exist, unbelievably, no official statistics as to the population of spinal injuries in the United Kingdom; the USA has details on 500,000 but the nearest we can get in this country to a figure is a conservative estimate of between 40 and 50,000, which comes from the International Spinal Research Trust in Enfield, an organisation that raises money for research purposes. The head of the research team, Dr. Peter Banyard, himself disabled, says that the average age of the spinally injured is 19.

Numbers of para- and tetraplegics are bound to increase, as life expectancy increases with the help of technical and surgical aids; the irony of this situation is clear: and apparent unending and hopeless prospect of despair stretches ahead occasioned by the very technology that is kind in quantity but cruel in its effects on quality. For many severely disabled, the urge to commit suicide is only thwarted by the lack of strength and

limbs to unscrew the top of the tablet bottle. Though more covert therefore than straightforward statistics, the battlefield, long term, lies in the minds of the severely disabled, in the regard or lack of it which society has for them and the respect they have for themselves.

Some technical 'accessories' which tetraplegics are forced to adopt, if they want to continue the struggle for self-reliance, are at best a little embarrassing and at worst, humiliating. If there are four freedoms or rights, inter alia, to which disabled people feel they have an unaltered claim and which are enjoyed by the rest of the community, in the main, they are: hope, dignity, equality and opportunity. With a few exceptions, of whom Roy Stringer is one, our society is too eager to be dismissive, too complacent in its regard for the capacity of any technology and too ingenuous in thinking that words are as good as deeds without reflection as to whether or not what is being offered can be used by the disabled or, even, if that is what the disabled want. Recognition through consultation is one way back for the disabled into the community and what is made infinitely easier if there is an accessible means, by which they can secure those four freedoms.

What Stringer has done, is to put some of the jigsaw together. He had worked for a year with Apple Macintosh in America and observed the use of a headset, like a 'walkman', which enabled students and youngsters to manoeuvre the cursor on a display screen while they were writing. The normal distance control is a 'mouse' which translates hand movements into computer instructions and by the pressing of a button activates a function or operation. The headset had to be modified for a disabled person and through the use of a blow switch, Roy Stringer fused the functions of the two, making it possible for a tetraplegic, having movement of the head, to use the cursor as though the normal 'mouse' were employed.

What makes the HEADSTART workstation different from the rest, and a Rolls-Royce among the go-karts, is the multi-functional display screen and the bewildering range of programs, functions and simultaneous operations which can be carried out. There really is nothing else like it and the implications for severely disabled people are enormous. Imagine an ordinary, blank, grey display screen and the complete inability of a tetraplegic to operate any kind of keyboard manually. The HEADSTART equipment is not a 'stick on the head' but preserves the dignity and equality of the user in that it is the same headpiece as worn by able-bodied operators. On the screen appears a calculator - not a picture but a fully operational emulation worked by the cursor; this is then moved across the display screen to the right hand side; beside it appears a keyboard and above, a defined area for typing a letter, in the top right hand corner there is a digital clock, bottom left - a magnifying scope and if required, the script can be linked to a

voice synthesiser which can be used to answer the telephone, and incidentally, the push-button dialling face can also be put onto the screen. All of this is happening simultaneously and all can be used by the operator by means of the headset. Every workstation can be adapted to an individual's needs and programs supplied to specific requirements. It is at this point that words become inadequate and the capability of the programs and the equipment has to be seen to be fully understood. The only other computer system for the disabled, in use, has to be operated by a keyboard and after that tetraplegics must resort to a board with letters to which the 'patient' responds by blinking eyes.

Fortunately, Roy Stringer has the commitment and enthusiasm which keeps him on the road, demonstrating the unique qualities of the HEADSTART workstation and he willingly considers any reasonable request to show its capabilities but the real proof can be found in the success of Andy Crowe, back to school after spinal injury only because he has HEADSTART to work with, studying for 'O' Levels in a class of able-bodied pupils and doing so on equal terms.

As someone said recently, if you had the time - and disabled people do - you could reproduce Constable paintings using this machine; well you could. You see the display screen is linked up to a colour processor and then to a laser printer; of course you would have to make sure that you used the correct kind of paper, pigment, chemicals etc, etc. What is more, it can be done without a helping hand. 🍏

Equipment for the Disabled.

John Lee our Sysop of the FORCE is the co-ordinator of a large Disabled Scheme in the West Country.

John is a champion for the Disabled, he gives everything in his quest to help other disabled citizens. He has compiled a Directory of Information which helps the disabled carry on with as normal a life as possible. It answers the many questions that we able-bodied never think about, like; Has my local library got wheel chair access? What am I entitled to claim for my disability?

Apple2000 are grateful for the unpaid work John puts into his duties as Sysop and as a gesture we are donating some software for John's new Lisa.

As co-ordinator John is attempting to spread the load and get more schemes off the ground, this requires equipment and the help of us able-bodied. John has found the Apple II an ideal machine for these schemes, although machines of any variety can be utilised.

Many members and dealers have old unwanted kit, machines, modems and software sitting in the corner gathering dust. If you have any such kit why not contact John and give it a really good home. You can be sure that it will be gratefully received, well looked after and give plenty of relief to those that most need it.

John can be contacted on:

01752 444444



Disabled Feature

APPLES FOR THE VISUALLY HANDICAPPED

by Henry Brugsch

The Computer revolution came screaming at me through media hype, and hoopla three to five years ago.

"Yes, you too can reap the advantages. Word processing! Telecommunications! Information retrieval! Networking!! All of these things can be yours!! Buy the brand new Grapefruit, available from your dealer at the inexpensive price of \$10,000. Finance if you like! The world of computers will be yours with this one, simple machine!!"

I wanted in! I wanted to have the benefits, and the power of it all! What follows is my walk down the slightly crooked path over the DOS errors and program crashes of the last few years.

Looking back over the last 3 years, it seems difficult to believe that in order to write anything of significance I had to haul out an ancient mechanical typewriter, roll a sheet of paper into its innards and start smashing the keys down in the hopes of producing legible text. I could be typing away, and the phone would ring. "Oh hell, where did I leave off? Hmmm something about the phone ringing. (skip a few lines start again) Ah, yes." and my wife, or someone else would have to proof the whole mess.

In 1983, the talk round Boston was "computers! computers! computers!!!" The box kept screaming out their advantages, and their ease of use. I had to have one! I knew that if I laid down \$2,000 or so, I might be able to get one to talk, read braille, or do something.

....'I have become one of the more vocal proponents of computers and their advantages'....

After shopping round, I discovered that the Apple seemed like a good solution. An all-up IIE was then available for \$3,000. This was slightly beyond my means at the time so I made a compromise and got a Franklin. This was at the time sold as a business system complete with two disk drives, CP/M, and bundled software. All of this for a thousand dollars less than the more or less equivalent Apple.

Then the fun began. I had to learn about Apples, and Franklins, and how they inter-related. Imagine it. I had wrangled with the dealer that I had chosen (over thousands of others) for a good price, and wandered into his boutique with a thumping heart, and money in hand. (Not to mention an Echo II speech synthesizer in my pocket) After some minutes, and some strange antics on the part of the dealer "Let's see, load DOS, and BRUN Textalker.ram. It should come up talking.--Hell, syntax error, let's see, oh yes it would help to change disks, wouldn't it." and so it went. Then the machine came up with "ready" in a robotic voice. That was the beginning. I got the machine home, and found that all I could make it do was run some BASIC games. There had to be more.

My first word processor was an expensive, and intricate program called "Braille Edit". This program not only becomes a totally dedicated word processor, but is also a braille translator to and from braille.

Early on, I was at a computer show in Boston where I met Betty O'Neil, the architect of TermExec, a complicated but reliable terminal program for the Apple. I told her I would be happy to buy her program, but it didn't work with speech. She looked my way and paused for a second, then she said, "Ok, I will send you a disk."

In 2 months I received the pre-beta test of Talking TermExec. Betty and I worked on the program, getting most of the bugs out of it. Making it perform well with speech, and enabling the proper use of review mode, a necessary line review capability within the Street Electronics program.

In time I learned the frustrations of dealing with Apple. The speech synthesizer that most blind Apple users have is the Street Electronics program that drives their range of synthesizers sold under the trade mark "Echo". These programs live in the upper 16k of ram, and therefore, draw on a good deal of memory. Another disadvantage is the fact that the program is hooked into DOS. Thus, most copy-protected software will not run with speech as a result of the rearranging of the DOS programming. All of these things weren't told to me by the dealer, but, we all live and learn. It was then on coming home with a brand-new copy of "Hitchhikers Guide to the Galaxy" to find it wouldn't talk that I went out and got an outboard device to run with the "Script" command. This helped with some copy-protected stuff. Another solution was the "Printit" card manufactured by Texprint of Needham, Massachusetts. This program gives a screen dump to a printer, or if you like a speech device.

Now, some years down the byte-stream, I seem to have got everything I need in the way of software. I sold the Franklin, and wound up with an Apple IIc and an Apple IIe clone (shh, don't tell em about that). Oh yes - Both systems are up and running, and both arrived here in the U.K. with no serious damage.

Currently, there are available reliable word processors, terminal programs, and databases that talk, and work reliably with the Street Electronics hardware. It seems that the Apple is coming of age for the blind user with ProDOS, Unidisk, and good software. My stable of software is now complete with the recent implementation of "Talking Sensible Speller" which has just become available.

As a result of these improvements to the quality of life, I have been able to do things that I never dreamed of in college. I used to dread the thought of producing a 20 page paper, with the affect that I limped through college. Since I have acquired the computers I have had some articles published in "Byte Magazine" and other sources. I don't consider myself a computer wizard but, rather an educated user. What ever that is! Certainly without these things I wouldn't have been preparing this article the day before I was to hand it in and certainly the barriers of the printed word have been at least partially destroyed in the output direction.

Thus, I have become one of the more vocal proponents of computers and their advantages. 🍏

Henry is an American now living in the West Midlands, he has been totally blind since birth.

Special Education: The Role of the Micro-Computer

L. Roy Stringer

We all tend to have fixed ideas about what disability is and what it can mean to a person, but those of us who have had only limited contact with disabled people always get it totally wrong. It is the misconceptions of 'able bodied' people that make life most difficult for 'disabled' people to cope with. The very fact that we classify people as 'able bodied' and 'disabled' can itself be the very cause of the 'disabled' person's greatest problems, particularly in the case of a physically handicapped person who is otherwise alert, intelligent and in full control of his or her intellect. These are the people for whom micro-computers have the greatest potential.

If one takes the view that everybody is physically disabled in some respect, then we can look at how we each overcome our disabilities. Some solutions require no direct use of technology at all, for example, the tall man must be constantly on the look out for things he might bump his head on and may have to stoop every time he goes through a doorway, while an unfit person has to take great care to be at the bus stop before the bus so he doesn't have to risk running. Others may need technological solutions which have become accepted as normal items, like spectacles and contact lenses to help us see clearly or sunglasses to protect sensitive eyes from glaring sunlight, mechanical grabbers to reach high shelves, central heating to protect us from the elements and even motor cars because "we'll never get there in time on foot". The human animal is renowned for its ability to adapt to any kind of environment through the use of technology, and the microcomputer is the device which has the potential to 'enable' people with severe physical handicaps to adapt to their environment and communicate in ways that are acceptable to those of us who use arms, hands, sound and facial expression.

I believe then that it is the inability to communicate freely that isolates physically handicapped people and makes them seem peculiar to the rest of us. If a disabled person can in some way communicate with us before we discover their handicap then most of us will readily accept them without any shock or revulsion. As an extreme example, I once heard a jazz pianist on the television in the next room and was so impressed by his style and ability that I went to see who it was. I was astounded to see that he was hunched up on the stool with his gnarled hands rising awkwardly to the keys from below the keyboard and that he apparently suffers from spina bifida. The audience didn't care, his fellow musicians didn't care and I didn't care, because he had completely broken the ice with all of us by communicating through his considerable musical talent.

For the jazz pianist, and others like him, there are many lines of communication that can be used creatively. He could be a great author, a renowned theoretical physicist, a sculptor, a painter, a design engineer or a composer, in fact, there is little to stop him from living a full life, interacting fully with his fellow humans. For a person, old or young, with his particular disabilities a microcomputer offers no more nor less than it does to you or me. But, for people with severe handicaps involving

the loss of the use of their hands, computers can improve the quality of life, raise self esteem, and thereby make life worth living.

Of course, the micro-computer has many roles to perform in various areas of special education, as a teaching aid for slow learners, as a stimulus for the mentally handicapped and as a communication aid for the physically handicapped, but I believe that its greatest potential is as a communications aid, and, as you will have already gathered, I use the word 'communications' in the broadest possible sense. People tend to regard the micro-computer as a highly developed product, but over the next ten years we will see its power increase a thousand fold. For the mentally handicapped, this additional power will offer little more than current machines, because here the computer's most useful role is as an interactive surrogate teacher, offering stimuli, seeking responses and providing rewards. For these roles, current technology has the ability to do all that is required of it, but for the physically handicapped there is enormous scope for improvement.

Before computers can become full time companions of physically handicapped people, performing a wide range of tasks on demand, a number of problems must be resolved. Firstly, the written word is the most impractical method of giving instructions to a computer because it is slow, prone to error, uses lots of peculiar, cryptic words (found only in badly written reference manuals) and typing is not the easiest thing for a physically handicapped person to do, so some alternative is required (note here that I do not see speech recognition as a viable alternative because most of the problems remain unchanged). Secondly, much of the software used by disabled people has to be specially written or adapted to work with the various input devices used by disabled people, making it scarce, expensive, and poor quality compared with commercial products, so some simple way of making the enormous range of commercial software accessible to the physically handicapped is required. Thirdly, the computer must be capable of doing many different things at the same time, for instance, if I am in the middle of writing a letter and need to perform a calculation, a calculator function should be immediately available, and if the phone then rings I should be able to answer it immediately, operate a speech synthesiser, refer to my electronic diary and make an appointment, hang up the phone, finish my calculation and, finally, return to my letter as if nothing had happened. Many micro-computers are technically capable of doing these things now, but most popular commercial software is not designed to work in such a hap-hazard way. Finally, the computer should be portable and self powered with the minimum capability to control a wheelchair and communicate via a portable telephone.

So what relevance would such a product have to everyday 'special' education? - I hear you ask, and my answer is that it would enable tetraplegic, spastic, muscular sclerosis and many other disadvantaged students to fully use their unimpaired intellect and study with able bodied children in main stream education and, eventually, compete for real employment. While solutions to these problems may seem unattainable in the foreseeable future, many of the requirements that I have set out above are being realised now and equipment is already helping severely handicapped students to study in mainstream schools, colleges and universities. The most significant trend in the micro-computer industry today is the development of graphic user interfaces which eliminate the need for text command entry. Such user interfaces also offer a high degree of similarity between different programs enabling one control system to be used for all programs. Furthermore, this same user environment is designed from scratch to utilise accessory programs which provide instant access to calculators, diaries, phone books and

dozens of other useful utility programs. In fact, the only feature not yet available is complete portability, but that is only a short time away.

Today, in a mainstream school in Essex, an 18 year old boy is studying for his 'O' levels which he couldn't take in 1985 because he fell off a roof and broke his neck. Because he is paralysed from the neck down, he uses small head movements and a single blow switch to write essays, draw diagrams, produce charts, set out math equations and incorporate them all into a single project. He can do all of this just as well as, if not better than his classmates, who move him and his equipment between classes and tend to his physical needs. In the evenings, he and his friends play computer games, write and play music and design strange objects with a real time 3-D modelling package.

Another 19 year old boy, who is even more severely paralysed, is using similar equipment to study for HNC examinations at South London College. His subjects include physics, chemistry and mathematics for which he has to produce very complex written material and drawings. Again his classmates willingly help him out.

In Birmingham a 24 year old woman, who is paralysed through a disease of the nervous system and has extremely poor eyesight, is using the same equipment to attend university for a degree course which covers computer studies, humanities and English. Like the two boys, she produces all of her work with small head movements and a mouth switch.

Each of these three are living fuller lives than they could without their own personal computer systems, and they are coming into contact with able bodied students which prevents them from stagnating and enriches the lives of all concerned. Their machines go home with them at night where they print out their day's work and then they use them for recreation and fun. For each of them, the computer has become an indispensable companion that has improved their quality of life and has given them the means to communicate ideas, images, music and concepts that they previously realised with their hands. In the very near future, more sensitive input control will enable spastics and people with other motor control disorders to enjoy the same things.

This capacity to offer equal opportunities for achievement represents, for me, the most important role of the microcomputer in special education and in the every day lives of the physically handicapped. 🍎

A short biography

L. Roy Stringer has been a micro-computer systems consultant since 1977. In 1984 he took up the offer of a senior management post with Apple Computer (UK) Ltd, a leading micro-computer manufacturer and the worlds leading computer supplier to educational establishments, before leaving a year later to set up his own micro-computer consultancy in Liverpool with partners Alice Stringer, James G. Munro and Stephen J. Ramsden.

Their company, BIT 32 Ltd, was set up to specialise in the design of business workstations, but before they had even begun trading, his wife's sister had a car accident which broke her spine and left her paralysed. As a result of this, he came into contact with the Computer Centre at Stoke Mandeville Hospital where he designed the BIT 32 HeadStart Workstation for tetraplegics and similarly handicapped people. BIT 32 now offers a complete system design service for disabled individuals and they are currently designing a radical new product which will give the most severely physically handicapped person complete unrestricted access to a standard commercial micro-computer system.

LETTERS TO THE EDITOR



F. Haak,
East Horsley,
Leatherhead

HARDWARE & SOFTWARE UPGRADING (APPLE MACINTOSH)

Having read the letter on Blyth support ('Buyer Beware', Volume 1(3)), you may be interested to learn about my experience with hardware and software upgrading.

Firstly, I would like to compliment you with your magazine and the Users Group. Having returned from the 'bush' I am impressed with the availability of information on the Macintosh in the UK.

In 1984 after considerable effort I became one of the first owners of a FatMac in Sarawak (North Borneo). In spite of the availability of a number of cheap IBM clones I decided for the Mac. Not only for its user friendliness but, being an expatriate, also to ensure worldwide support from a reputable hardware manufacturer. My software I had to scramble from various countries. The majority though was obtained through friends in the U.S.

Upon arrival in the UK for a new assignment, I decided to upgrade my Omnis 2 software obtained in the U.S. Through very pleasant direct communication with Blyth in the UK I was able to upgrade to Omnis 3 at a reasonable fee. Although there has been some confusion about registration I am now also registered in the UK and receive update and new product info. A rather positive experience. This is how it should be!

Getting my hardware upgrade to MacPlus at the introductory price was a slightly different story. My dealer after initially accepting my order, informed me that the upgrade had to be performed through the dealer who originally supplied my FatMac. This dealer was based in the Netherlands, rather awkward for me to arrange. It should be noted that Apple in the Netherlands were running a similar upgrade offer. Having no luck with my dealer I contacted Apple UK direct. After a rather strong discussion they were able to oblige through the dealer I originally contacted. Although I am pleased with the ultimate response I do think that a reputable world market supplier should consider this kind of service part of the normal routine.

Some experience with Microsoft. Most of my software is made by Microsoft. I have duly registered all of my software, albeit in different

countries, but never received any information on upgrades or new products! I once even wrote them a letter to complain about this problem, but never received a reply. Fortunately your magazine made me aware of the Multiplan/Chart to Excel upgrade and I was able to obtain it. Not as easily as my Omnis upgrade though. Direct communication was rather rude and I was forced to obtain the upgrade through a dealer, which having just arrived in the UK I did not yet have. The dealer I contacted was not too interested since I did not purchase my software with them. After some discussion the dealer obliged and I did get my upgrade. A far lower standard of service than that of Blyth. What is wrong with direct dealing and cash payments?

Lastly a request. Perhaps you could run an article on desktop communications (something we did not yet worry about in Sarawak), because I am rather confused about the choice of modems, communication links and databases and other facilities available.

[Reply]...

Thanks for your informative letter, I am glad that you like our efforts on the magazine and that you have found Blyth a fair and competent company to do business with. Desktop Communications will be featured in the future. We will also bear it in mind for the Workshops we are planning later in the year. Editor. ■

From Bob Wileman

I write to congratulate you on the new format Apple 2000 Magazine, full of interesting material for the enthusiast, but what about the potential enthusiast, with little in the way of starting knowledge, not even the Apple IIe reference manual, or it seems the ability to acquire one? How could your organisation help there?

My main interest is in finding enough useful or interesting things to do with an Apple IIe before I dump it and buy an Amstrad. So far that is proving difficult. The most useful work has been done on Elite format 80 enhanced word processing. Personal mailing lists directories and report writing. The most interesting work has been found on Basug library disk D093 'Educational' and the chess game on D018.

Otherwise I have to say my purchase of 10 library disks was a disappointment.

An area of great interest for me will be Dave Ward's future articles on applications in the educational field - not for school time tabling and accounting, but for actual teaching of secondary school kids.

I hope you don't think of my comments as purely critical - I will be writing to Graham Attwood offering some suggestions for improving the software library.

I look forward to getting into the Apple user fraternity via your paper.

[Reply]...

Thanks for the letter, you should be better off after our little chat on the phone. I have played with the idea of using the beginners pages that we published a few years ago. If I can persuade some one to update that information I will publish them in the coming issues.

The Software Library on the II is a very thorny problem, with over 2000 files it will be a nightmare to sort the good from the bad, however we welcome members views on the contents and do from time to time re-arrange the contents. We are at present attempting to catalogue the disks into a readable form.

Dave Ward continues to supply useful articles and I am sure that many members look forward to his future writings. Editor ■

Uttoxeter
Staffordshire
ST14 7QY

4 January 1987

Dear Jim,

After reading the correspondence from Geoffrey Williams and the replies from Mr Niroo Rad, UK Sales Manager of Blyth Software and yourself I am wondering just how many readers will have decided to

purchase a software product from Blyth as a result.

The letter from Mr Rad was in my opinion, totally negative and one might infer from the fourth paragraph that Blyth do not support any foreign purchasers (of course that cannot be true). The tone of the letters certainly indicates that much of the correspondence must have been written on fire-proof parchment! After all, Customers are a damn nuisance (particularly when they complain) and many have felt that a company would get along better without them!

One cannot of course, condone the purchase of software from a foreign source just to save money and expect the same service but there might have been other perfectly innocent reasons.

The points propounded by Mr Rad are almost certainly legally correct and he was quite right to have stated them unequivocally. However, everybody would have benefited by Mr Rad being a 'White Knight'. Even Blyth would have gained since Mr Rad's letter would then have been a highly positive advertisement for almost no outlay.

Yours sincerely,
Dave Ward

Letters

Continued on page 34



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[Reply]...
Blyth Software are very User Friendly, as you can see by the amount of support they give the group as a whole.

The journal is a place for views to be aired and I feel that this has been achieved by both parties having equal opportunity to do so. I do appreciate what you are saying, the previous letter states what good service has been received, hopefully the matter is now closed.
Editor

This is the letter (and reply) sent to Apple in December about disabled members needs:

To: Apple Computer U.K. Ltd

5th December 1986

Dear Sirs,
On behalf of our Disabled Members and other disabled people we write to formally request an extension of your discount schemes.

Special Discounts have been offered to both Journalists and Apple University Consortium members, but these are not currently available to the Disabled.

We recognise that for some time Apple (USA) have detailed a Manager specifically to this matter, but have heard no word of results. As we have several key members from the disabled community, we wish to request that the Concessionary Rates which could be made available to them can at last be so done. Looking forward to receiving an early reply on this matter, we remain,

Yours faithfully,
For and on behalf of Apple2000
Jim Panks, Chairman.

Reply.

January 15 1987

Dear Jim,
Thank you for your letter concerning Apple Computer's policy towards the disabled.

As you are aware, Apple Computer Inc. has established a special group dedicated to researching the use of computers by people with special needs, under the guidance of Alan Brightman. The company also has a far-reaching community programme which benefits charitable organisations for the disabled amongst other groups, and which is not widely publicised. In the U.K. Apple supports a number of charities, including the spinal injuries unit at Stoke Mandeville where a number of Macintosh systems are used in the computer centre with the Headstart system.

Apple Computer will continue to support groups with special needs, both with direct donations and with research resources such as its education programme and Alan Brightman's group. The commitment will therefore take the form of on-going global support rather than a marketing programme aimed at the disabled community.

I hope this information is helpful to your readers. If you require any further details, please do not hesitate to contact me.

Yours sincerely

Mary Ainsworth
Public Relations Executive.

Leicester

5th Jan.

As a regular reader I am delighted to receive your magazine every so often, and write to advise you that there are people out here actually in possession of, and using the IIGS for some time!!

I take this opportunity to share my experiences with you for inclusion in your worthy publication.

Firstly, I did have a problem getting my mouse to behave; for some unaccountable reason he would work in a vertical direction and refused to acknowledge lateral control: and then after about three days, as if he had never been away, there he was sniffing around on the desktop.

Mousedesk, which came free with the machine is a very impressive bit of kit with super graphics and fast utilities, and even recognises and tucks itself away in my Flipper card in Slot 2.

The Smartport for the disk drives is indeed smart, allowing, or so it would appear, simultaneous read and write to disks in different drives when copying!!

The drawback is that the 3.5" disks with their 800K capacity and faster, much quieter transfer of data make the old 5.25" jobs seem crude and incompetent by comparison. Unfortunately, it is likely that they will remain for some time because there is all that copy-protected software that cannot successfully be transferred to the new media, and the sheer economics are that a drive is likely to be less expensive than the new software.

My copy of AppleWorks V2.0 came fitted with ProDOS 1.1.1, which frankly struck me as odd, as ProDOS 8 is available on the MouseDesk disk. A quick transfer of ProDOS and AppleWorks was up and running, automatically date-stamping the AppleWorks prompt, and allowing access to the GS's Control Panel from within the program. A quick patch to replace the spreadsheet's dollar sign with the £ symbol and we have put right that which Apple really should have sorted out.

So all-in-all it does make the //e seem a bit tame: the appearance is more up-to-date and the performance and screen display are undoubtedly streets ahead of its predecessor. When compared to its competitors it is not an expensive machine but when you consider that only 2 years ago I paid more than this for my //e, perhaps it makes sense.

Now for the compatibility report: games and the GS do not seem to get on. Zaxxon, Miner 2049, and

Skyfox did not seem to want to run, while The Eliminator has a most curious screen display! Most other stuff was OK, but blow of blows, Applewriter //e, which I use very extensively with automated WPL programs, would not run properly. I will keep you posted.

Mike Scott

reply:

It is good to hear you are pleased with the new GS machine.

Although AppleWorks 2.0 has ProDOS 1.1.1, I think it has already been modified on my copy, as the Control Panel is already accessible. You can of course get the £ sign by changing to the U.K. keyboard layout; unfortunately you then lose | and \, which looks like a mistake in the ROM since they are not substituted by anything useful (I have also heard reports of this key and the 'tilde' key giving the wrong characters!).

I must endorse your final point about Applewriter; I have always preferred it of all WP programs, and feel lost without it - I have now reluctantly got used to AppleWorks WP, but it just isn't the same without WPL.

Graham Attwood

Revd William G Rees BD, MSR,
Port Talbot, West Glam.

Dear Jim,
I would be most grateful if you could help me with the following problem:

I have Wordstar, version 3, which refuses to boot or run on my system.

The latter comprises an Apple //e, twin disk drives (one Apple, one Peanut) a Rosco Ltd Resolution 64 80 Col Card, Epson Parallel Card, Apple Super Serial Card and Cirtech Z80 Card.

I have the "Clubkeeper" program, which uses CP/M 2.2 version, and this functions perfectly.

I have had the system checked by the major Apple distributor (AppleCentre South Wales) and they can find no fault with the hardware.

The Wordstar disk has also been checked by friends on similar equipment, and they find that it runs perfectly for them.

Everyone is completely mystified since software and equipment here seem to be perfect.

Could anyone please suggest a reason and cure for the apparent fault.

Yours sincerely,

[Reply]...
Thanks for the letter Bill, I hope that one of our members will come up with the answer and let us all know the reason your machine is playing up.
Editor

Letters on any Apple related subject are always welcome.

Members Small Ads.

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Telephone John Swainson on
(Rickmansworth)

WANTED

Books/Manuals for Apple 2+/2e on:
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Contact Alex Bermingham, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

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Phone David

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THE LOCKSMITH VERSION 6.0

Dave Ward



Richard Wilday

When you want to copy one of the 'copy protected' diskettes in your disk library what program comes to mind? Probably The Locksmith!

The Locksmith version 2.0, first published in late 1980, was almost certainly the fore-runner of the commercially available 'Nibble copiers'. It was introduced in response to the ever increasing number of software packages on diskette that were uncopyable by the standard disk copy programs such as COPYA supplied by Apple Computer Inc. In an attempt to reduce the incidence of 'piracy' the software publishers altered one, or some, of ways in which their diskettes were formatted so that the standard copiers would not copy them. A little over a year before The Locksmith version 2.0 appeared a 'spreadsheet' program, set to become one of the most popular packages ever, was published and it was, at that time, extremely well 'copy protected'. With the appearance of these 'copy protected' packages coupled with the general refusal of the publishers to provide a 'back-up' copy the stage was set for the introduction of programs that would allow users to 'back-up' their expensive purchases. The response was The Locksmith version 2.0.

Soon after its appearance other manufacturers flattered the authors of The Locksmith version 2.0 by introducing competitive products. During the intervening years The Locksmith and other 'nibble copiers' have gone through many upgrades and versions. The main reason for this is that the publishers of the 'copy protected' packages have refined their methods of 'copy protection' to 'fool' the copy programs. The cycle of improved 'copy protection' followed by the revision of the copy programs to defeat that protection seems almost never-ending. At each revision The Locksmith not only had its 'nibble copy' program improved but also had added utilities to facilitate the use of the product. The Locksmith has progressed from the version 2.0 which was a simple 'nibble copy' program to the latest release version 6.0 which is highly sophisticated 'nibble copy' program with a vast array of utilities.

Since the introduction of The Locksmith version 6.0, a few months ago, we have used it extensively and will report our findings below.

The Locksmith version 6.0 is supplied on a 5.25 'flippy' diskette the main side contains the program and 'overlays' whilst the flip side contains a library of 'back-up' procedures (parameter files) to allow the nibble copier to copy many popular 'protected' program diskettes. A 73 page comprehensive manual is also supplied.

Booting the main side of the diskette produces the Main Menu screen within 2 seconds and during the next few seconds the rest of the main program loads in. The four lines of the copyright notice disappear as soon as any key is pressed leaving the status display clear.

```
THE LOCKSMITH - VERSION 6.0 - REVISION A
.00  COPYRIGHT (C) 1980-1986
.25  ALPHA LOGIC BUSINESS SYSTEMS, INC
.50  4119 NORTH UNION ROAD
.75  WOODSTOCK, ILLINOIS 60098
HEX 00000000000000001111111111112222
TRK 0123456789ABCDEF0123456789ABCDEF0123
```

B BACKUP/COPY F FAST BACKUP / CLR STATUS

N DISK EDITOR L LOAD RAM CD * PARAMETERS

T TEXT EDITOR R RAMCD UTILS Q SCAN DISK

A ROOT TRACER C CERTIFY DKS U 16-S UTILS

D DOS3.3 UTIL X DSK RECOVER S DISK SPEED

E ERASE DISK

I INSPECTOR

CTRL-Z PRT SC RESET EXIT LS ESC RESTART

Main Menu Screen

Now let's look in some detail at these facilities which are loaded in from the master diskette, when a particular function is requested. The reason for this is that there is insufficient main memory in the computer to contain all these utilities in the main memory, in fact even if the extra 64K could be used in an Apple IIe there would not be enough to retain all the functions. Therefore they are loaded in as and when they are required. This method is sometimes called 'overlaying' and is used in many other large programs such as AppleWorks.

It's not a bad idea to start at the bottom line of the main menu so here goes :-

<ESC> RESTART - Pressing the escape key will cause the Locksmith to abort whatever it is doing, although this may take a few seconds if the program is performing a complicated task. One or more presses of the ESC key will bring you back to the menu screen above unless you are using the FAST DISK BACKUP function.

<CTRL-Z> PRT SC - The Locksmith mostly uses the text screen and pressing the CONTROL KEY AND Z simultaneously will dump the screen to your printer.

<RESET> EXIT LS - You may exit Locksmith by pressing RESET. This causes the diskette in drive 1 to boot.

</> **CLR STATUS** - Clears the 4 lines of the status display area.

 BACKUP/COPY - For most Apple users this is the reason for purchasing The Locksmith - the nibble copier. During the past 5 or so years the nibble copier has been steadily improved in an attempt to keep up with the vast improvements in copy protection.

This backup function in common with all other copiers of protected software should be referred to as 'Nibble copiers' not 'Bit copiers' since they actually read 'Nibbles' not 'Bits' from the disk. A true 'Bit copier' would experience considerably less trouble copying protected software than current 'Nibble copiers'. In fact it is most unlikely that a software program could be written to read accurately the 'bit stream' from a diskette without the help of special hardware.

Locksmith has been much improved since the version 4.1 ; in that versions 5.0 and 6.0 can read, though not with complete accuracy, timing nibbles which are 8 bit disk-bytes with extra zero bits following. EG : 1111111100 as well as the normal nibbles these timing nibbles also referred to as sync. bytes or autosync bytes would normally be read as 8 bit bytes - the extra zeroes would be lost forever. The timing nibbles are the cornerstone of Steve Wozniak's ingenious disk I/O system. Since Locksmith 6.0 nibble copier can detect most of these timing nibbles it is, therefore, able to copy many diskettes with little input from the user.

When you select the BACKUP/COPY option from the main menu you will be asked which drives you would like to place the source and target diskettes. You may use one drive but as Locksmith copies a track at a time much diskette swapping will be necessary. Next you will be asked the tracks to copy ; usually the default of \$00 (0) to \$22 (34) will be used. Two other options will be presented but for an unknown diskette you would be advised to reject these at first : 1) Synchronised tracks 2) Nibble counting - keep the track length the same.

Pressing the space-bar when requested will allow Locksmith to start copying. Locksmith copies track by track very slowly which the original publishers justified as a deterrent to piracy! A code character is placed against the track copied in the status display area to assist users to determine if the copy is good.

Unfortunately there is too little space in this article to discuss the finer points of The Locksmith 6.0 nibble copier and copy protection. However, Editor permitting we will return to this subject in an article in a future Apple 2000.

<F> **FAST BACKUP** - The Fast Disk Backup utility was first introduced in The Locksmith version 5.0 (1983/1984) and has been improved somewhat in the version 6.0 . The ability to 'backup' your normal sectorised Dos 3.3 , ProDos , Pascal or CP/M diskettes is extremely important. If you don't 'backup' your data diskettes ; well you should!

Since a lot of publishers have seen 'sense' and started to produce copyable software , with the introduction of ProDos, this is arguably the most important reason for purchasing The Locksmith 6.0. Just consider how many standard diskettes you copy and how long it used to take, you might even get a surprise!

Fast Disk Backup is treated merely as a utility in the manual but surely it is far more important than that and deserves a

much larger 'plug'. The manual states that the Fast Disk Backup function is very fast - well the first time you use it you might even think that to be an understatement! They don't spell out the accuracy of the utility since most potential purchasers might say OK it's fast but where's the catch. There isn't one Locksmith 6.0 Fast Disk Backup is extremely fast and very accurate. So how does it do it ? The anonymous author of this function cleverly devised an algorithm that reads the nibbles from the disk and translates them at the same time. So it is capable of reading a track in one revolution of the disk in 0.2 seconds!! Locksmith 6.0 Fast Disk Backup also has the inverse algorithm to enable it to write a track back to your copy disk in just 0.2 seconds. The time constraints in translating and writing are horrendous - if you've got a week to spare just try translating a single sector using pen and paper, if you can.

Remember Locksmith 6.0 Fast Disk Backup also finds the time to carry out all those checks on the integrity of the data it's reading just like COPYA. By the way some other copiers can almost match Locksmith 6.0 Fast Disk Backup but they do not translate the disk nibbles read and so use more than 33% extra memory to store the data.

Invoking Locksmith 6.0 Fast Disk Backup by pressing F from the main menu fairly quickly produces the following screen :

```
LOCKSMITH 6.0 FAST DISK BACKUP

R
W
HEX 000000000000000011111111111111112222
TRK 0123456789ABCDEF0123456789ABCDEF0123

0
1
2
3
4
5
6
7
8
9
A
B
C
D
E
12 F

          RAM CARDS:

          0 16K
          1
          2 128K
          3
          4
          5
          6
          7

PLUS 256K AUXILIARY MEMORY.

35 TRACKS PER PASS.

] PRESS [RESET] TO EXIT.
```

Please note that all slots even slot 3 in an Apple //e are searched for the presence of memory cards. A scan is also made of the auxiliary slot to see if memory is present. The standard 64K, Ramworks, Titan and Checkmate Technology extended memory cards are recognised - witness the legend PLUS 256K AUXILIARY MEMORY. due to a 256K Ramworks card in the auxiliary slot. Saturn 16 - 128K cards and their clones are recognised in all Apple // computers - notice the 16K found in slot 0 (pseudo in the //e) and the 128K Saturn card in slot 2.

If the total memory found exceeds 140K (35 tracks @ 4K each) then all the data from a diskette will be read into memory. If, during reading, a sector or sectors are found that cannot be read the program tries a few times and then marks the offending sectors on the screen. However, when it writes the track to the target diskette it writes a virgin sector (newly formatted) to that diskette.

Observe the 12 near the bottom left-hand corner of the screen which refers to the source (drive 1) and the target (drive 2) drives. You may change these by simply entering say 22 followed by a carriage return if you wish to copy only using drive 2. Diskette swaps will be prompted where necessary. Typing V followed by a carriage return will cause the target diskette to be verified. V uppercase only can be pressed during copying to toggle the verify/no-verify. If you have sufficient memory to copy a whole diskette you may specify 10 to read the whole source diskette into memory and then use 01 to write it out to the target diskette.

The Locksmith 6.0 Fast Disk Backup will allow you to change certain parameters to affect the way in which the program operates. These are entered using 4 digit hexadecimal numbers. For instance if you have copied a diskette into Ram memory you may make mass copies more easily by specifying parameter 0018=FF followed by a carriage return. Writing will now take place alternately between drives 1 and 2 ; all you have to do is to feed in the diskettes!! Incidentally these parameters are the absolute locations in memory so you can actually alter the Locksmith 6.0 Fast Disk Backup code. This technique could enable the copying of certain protected diskettes!

The par time for copying diskettes using this utility with a twin drive system is less than 20 seconds without verify and less than 28 seconds using verify.

<N> DISK EDITOR - This was the Nibble editor in previous versions hence the <N>. This editor can now edit disk data sectors and data stored in memory cards too. The manual explains very well how to use the DISK EDITOR as a nibble editor but is not at all clear how one is to perform the other features! The nibble editor is made more difficult to use since you have to specify parameters by their name. What do you think of DF.HDR1.WRT ! A crib table listing them all can be found at the end of the manual.

<*> PARAMETERS - You can view or alter the values of parameters using this facility. For instance :- SHOW AF.HDR1 will show the value of D5. AF.HDR1 B4 will change the value of AF.HDR1 from D5 to B4. This utility would be more useful if there was a simple way to list on the screen all the parameter names, however, they are listed at the end of the manual.

<T> TEXT EDITOR - Due to the myriad of protection schemes now used by software houses it is almost impossible to envision a nibble copier that would be able to copy all such diskettes. With this in mind The Locksmith 6.0 allows you to alter parameters which will cause the copying process to be altered to enable the nibble copier to perform better on certain diskettes. The author of Locksmith 6.0 has taken this concept a stage further by allowing users to program Locksmith 6.0 to alter the way in which it copies and thus tailor the program for a specific diskette. This is termed Locksmith Programming Language.

The TEXT EDITOR allows users to manipulate files containing this programming language. These files can be stored on special diskettes termed parameter disks. Such a disk is supplied on the reverse side of the master diskette and

technical users to copy their protected diskettes without knowing anything about the actual parameters. They also allow the knowledgeable user to create his/her own parameter files to copy specific diskettes not on the Locksmith parameter disk.

Copy protection artists are not fools and with little difficulty they can render the idea of parameter files almost useless. Indeed this already appears to be happening. The simple method is to allow their special disk making program to produce slight variations which would each require a different parameter file!!

<Q> SCAN DISK - Previously known as Quick Scan produces a Hi-res picture of some or all of the tracks on a diskette. The fields of Sync. nibbles are shown in inverse. The signature produced can enable skilled users to determine something about the way in which a diskette is copy protected.

<S> DISK SPEED - As might be expected this allows one to check the speed of one's disk drives but unfortunately there is no mention how to adjust your drives if the speed is found to be out. The ideal speed is 300 RPM but drives deviate over a period of time and some copy protected diskettes require accurate drive speeds to enable successful copying. This is an excellent free-of-charge utility but it does actually overwrite the diskette in drive 1. Only track 0 is affected but you would be well advised to use a blank diskette not your Locksmith master!!

<C> CERTIFY DISK - This is a utility which checks ability of a particular diskette to retain data reliably. It does, of course, destroy any data already on the diskette!

<E> ERASE DISK - This utility allows you to erase part or all of a diskette. Certain copy protected disks are more easily copied onto completely new or erased diskettes.

<U> 16-S UTIL - On choosing U from the main menu you will be presented with the screen below :-

```
16-S UTIL
.00
.25
.50
.75
HEX 000000000000000011111111111111112222
TRK 0123456789ABCDEF0123456789ABCDEF0123

SELECT FUNCTION:

V 16 SECTOR FAST DISK VERIFY
F 16 SECTOR FORMAT
C 16 SECTOR COMPARE
S 16 SECTOR SYNC SIGNATURE
```

16 SECTOR FAST DISK VERIFY - Simply reads every sector on a normal diskette be it Dos 3.3, ProDos, Pascal or CP/M and informs the user if any of the sectors are bad.

16 SECTOR FORMAT - This utility simply formats a blank diskette. You can select a range of tracks and half-tracks may be specified. Formatting takes about 30 seconds and you can't save files to them because no directory has been written to them!! A good way of formatting diskettes quickly was suggested in a back number of Apple2000 magazine. The method is to format a new diskette from its own operating system and then make as many copies as you need using Locksmith Fast Disk Backup.

16 SECTOR COMPARE - This uses a sophisticated algorithm to read every sector of a normally sectorized diskette. On reading another normally sectorized diskette a comparison is made and any sectors which differ are flagged.

16 SECTOR SYNC SIGNATURE - Checks the synchronisation of the sectors on a track of a normally sectorized diskette. This can give clues as to how the tracks were written.

A number of new utilities and other changes have been added to the Locksmith 6.0 diskette since the last main revision.

Firstly the protection has been removed which allows the diskette to be booted on Apple //c and Apple //GS computers and secondly Version 6.0 loads very fast.

Although Locksmith loads data from the diskette at a little less than half the speed of Speedloader (an excellent utility available from Apple2000) it fools the user by quickly loading its main menu thus taking his/her mind off the rest of the loading process!

<D> DOS3.3 UTILS - Pressing D from the main menu quickly produces the following screen :-

```

                                DOS3.3 UTIL
.00
.25
.50
.75
HEX 000000000000000011111111111111112222
TRK 0123456789ABCDEF0123456789ABCDEF0123

C SHOW CATALOG      K FIX SECTOR COUNTS
E ENCRYPT FILE       D DECRYPT FILE
U UNDELETE A FILE
L LOAD A DOS FILE INTO MEMORY
M SHOW DISK DISK SPACE MAP
V VERIFY VTOC INTEGRITY
R REMOVE DOS FROM DISK
A ALPHABETIZE CATALOG
```

Most of these utilities are evident as to their purpose but there are some points of interest which we will describe :-

SHOW CATALOG - lists any file that has been deleted and still has a reference on the diskette. File type D is used.

UNDELETE FILE is used to recover a deleted file.

ENCRYPT FILE - This reads a file into memory and requests a password twice. This is to ensure that it has been entered correctly as key presses are not echoed on the screen. Encryption is fast and takes about 1 second per sector. The encrypted file is then written back to the disk ; in fact it overwrites the original file! The encryption algorithm used is claimed to be excellent and a file consisting of all zeroes encrypted with a four letter! password produced what appeared to be total gibberish.

DECRYPT FILE - This is the inverse of ENCRYPT FILE and requires the same input from the user. Yes it did recover our file!

<X> DSK RECOVERY - Disk recovery is a utility which attempts to copy damaged normally sectorized diskette onto another diskette so that valuable data may be recovered. Providing that the data in the data sectors is intact DSK RECOVERY will find it even if the track was written off centre and/or the address sector information is lost. It appears to work quite well but will not, hopefully, be required too often.

<A> BOOT TRACER - The Locksmith publishers refer to this as AUTOMATIC BOOT TRACER. This utility is really intended for machine language programmers who wish to discover how a diskette is 'protected'. It may, however, be used by any interested user. The AUTOMATIC BOOT TRACER acts like a machine language 'debugger' on code stored in a memory card in your Apple < eg 16K or 128K cards in any slot>. The utility reads the code from the diskette whose boot code you wish to trace and stores it in your ram card so that you may closely examine it at will.

<R> RAMCRD UTIL - This set of utilities checks the integrity of ram cards in your Apple computer and also allows data to be moved to and from main memory and the ram card.

If you purchase Locksmith 6.0 to copy diskettes here are a few tips :-

- 1} Try FAST DISK BACKUP first.
- 2} Try nibble copier without changing any parameters.
- 3} If all these fail try the parameter files.
- 4} If still no joy then check you drives to see if they are running at about the correct speed. Then try again. As a last resort try to find the correct parameters.

Remember standard disk copiers such as Locksmith FAST DISK BACKUP check the integrity of the data and so produce good copies. Nibble copiers don't check the integrity of the data


because they can't!! Nibble copiers can and often do produce poor copies for this reason.

Summary

In our opinion the star of the Locksmith 6.0 show is the FAST DISK BACKUP function ; it is so fast that it is difficult to want to use any other slow copier again. The nibble copier is rather slow but copies many protected diskettes well, however, for aforementioned reasons the parameter files do not always function too well.

Many of the other utilities you will from time-to-time find useful. Locksmith may soon require an update since it does not recognise the new Apple Ram Card and look-a-likes.

ProDOS is not catered for although there is a P command space allocated for such a utility in the main menu! It would be nice if Locksmith refused to copy your diskette unless it was write protected - how many diskettes have you lost by writing to the disk you wish to copy!

Due to the large number of utilities in The Locksmith 6.0 it has not been really possible to review them all in the depth we would have liked. If, therefore, Members would like further detailed analysis of particular features of this program please inform us. 

THE LOCKSMITH VERSION 6.0
Publisher : Alpha Logic Business Systems
4119 North Union Road
Woodstock
Illinois 60098

Short Courses on the Apple II Microcomputer.

The University of Salford will be running short courses based around the Apple II machine. These courses will appeal to users of Apple II +, e, c machines.

The courses will run on dates between 6th and 10th April 1987 and Apple2000 members will qualify for a 10% discount on course fees.

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These courses are run by the University Staff and full details can be obtained from :-

Conference Office, Maxwell Building,
University of Salford, Salford M5 4WT.
Telephone 061-736-5843 Ext 449.

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Flipper

New RamDesk Manager

Dave Ward

Cirtech have produced a brand new RamDesk Manager software for their FLIPPER 1 megabyte memory expansion card for the Apple II range of computers with expansion slots. You may recall that we reviewed one of the first FLIPPER cards & original software in the February 1986 issue of Hardcore. Cirtech have kindly supplied us with a new manual and the accompanying 5.25" diskette for review.

The FLIPPER can be fitted into slots 1-7 in Apple II, Apple II plus, Apple IIe, Apple IIe enhanced and Apple IIGS computers. The card is based on the new Apple standard for large memory expansion cards & should, therefore, be compatible with all future software unless Apple move the goalposts!

The card may simply be used as a massive one megabyte ramdisk by Dos 3.2, Dos 3.3 (and most fast versions), ProDOS, CP/M & Pascal all with the minimum of effort by the user. Indeed ProDOS, Pascal 1.3 & Cirtech's CP/M form a ramdisk automatically.

The novel idea introduced with the FLIPPER was the ability to divide that 1 megabyte into a maximum of 4 separate ramdisks. These ramdisks may be turned into 'work areas' by formatting them and making them bootable. By this means you can quickly flip between those 'work areas'. The RamDesk Manager which creates these ramdisks also allows you to back-up and restore the images of work areas. You can only boot and back-up 'work areas' NOT ramdisks OK!

NEW FEATURES

The new RamDesk Manager software improves many features including facilities to name, catalog 'work areas' and faster back-up & restoring of 'work areas'. For those users of Apple IIe enhanced and Apple IIGS computers the RamDesk Manager has been transformed by the introduction of Macintosh-like pull-down menus and mouse control.

The new manual has a brighter look and contains the updated information relevant to the new software. Like the old manual it is quite comprehensive even going into details as to how programmers may access the memory.

The 5.25" diskette RamDesk Manager and Support Utilities diskette is double-sided. The main-side of this diskette contains Pascal, CP/M and Dos 3.3 files to enable older versions of Pascal and CP/M to recognise the ramdisk and allow Dos 3.3 ramdisks to be booted (ie a 'work area'). When booted this diskette loads in a program to enable you to produce RamDesk Startup 3.5" or 5.25" diskettes. Both sides of the original diskette and the RamDesk diskettes you prepare are all copyable.

During booting of the RamDesk startup diskette the program determines which type of machine you have and will produce one of two RamDesk Managers. You will be requested to make a 'one-time' choice of how the memory in the FLIPPER will be apportioned, the table below showing the available options:

Option	Size of Work area (in kilobytes)				No. of Work areas
1	984				1
2	492	492			2
3	328	328	328		3
4	246	246	246	246	4
5	492	246	246		3
6	738	246			2

On enhanced Apple IIe and Apple IIGS computers a graphic RamDesk Manager is produced which utilises the double hi-res graphics producing Macintosh 'pull-down' menus with mouse control. The mouse operation is so easy; just point and 'click'. It's literally child's play!

One point however; if you click the solid-apple in the top-left-hand corner you will pull down a menu showing the 'short-cut' commands (utilising the open-apple & closed-apple keys). If you don't have a mouse you can use keyboard commands. First press escape and then use the horizontal arrow keys to choose the menu. Vertical arrow keys can then be used to pick the option you desire in the menu.

On other machines a text version of the RamDesk Manager will be loaded. This can also be loaded if the space bar is smartly pressed immediately on booting. After choosing the number of areas you will be presented with a text version of the pull down menus in forty columns:

Areas Disk Activate Restore Backup Clear

You can choose the menu using the horizontal arrow keys and pressing return pulls down the menu. In the menu the same arrow keys allow you to select.

When you have chosen a work area its name, size, free space, operating system and catalog will be shown! you can even scroll through the catalog with < > or vertical arrow keys.

Most users of the RamDesk Manager will want to 'FLIP' between areas and/or perhaps use the main memory of the Apple whilst retaining the option to quickly return to their application(s) in the FLIPPER. Therefore at the start of a session the work area(s) will need to be formatted & have files uploaded. Also at the end of the session some portion of each work area will need saving or backing-up. Backing-up is extremely important because of the volatility of RAM memory.

FLIP DISKS

The RamDesk Manager contains utilities to enable users to very quickly make back-ups (memory images) of their work areas onto 5.25" or 3.5" diskettes. These memory images are called 'FLIP' disks & can be used to restore work areas just as quickly. This technique has enabled Cirtech to keep the cost of the product down and allow users to make these needed back-ups. It's also about the best method - just consider the alternatives:

1> You could format & load all the files you need at the start of a session then, at the end of the session, format diskettes and save all those files. You'll be lucky to do either of those operations in less than 5 minutes; more likely 10-15 minutes will be required even if you don't make any mistakes.

2> Why not leave your Apple on all the time? I do. Back-ups, however, will still be required in case of power supply glitches etc.

3> Battery back-up might help but such equipment is very expensive and you will still need to make some sort of back-up onto diskette to be absolutely safe.

Both sides of the FLIPPER RamDesk Manager and support utilities diskette supplied by Cirtech and the RamDesk startup diskette you prepare are all copyable by standard copy programs - don't use nibble copiers. Those of you who are inquisitive and wish to know what is on the 'FLIP' disks that are the back-up image of the work areas will find that they appear to be 'copy-protected'.

Here's why: Dos 3.3 takes two disk revolutions to read a whole track (4 kilobytes) into memory and also takes at least as long to write out a track back to the diskette. Some of the newer programs such as SPEEDLOADER are capable of reading a track in a single revolution but it seemed to be impossible to write the track back in one revolution. The programmers at Cirtech appear to have performed a little magic here by changing the way in which the 'checksums' on the data are carried out. What they have done is to provide routines that will read or format and write a single track in a single revolution of the diskette!

You gain a massive saving in time and the small loss in not being able to read the diskettes using normal utilities. Who wants to copy a 'FLIP' disk anyway since it only takes 15 seconds to produce one? So make two if you want another back-up. I bet you can't find a disk copy program that will beat 15 seconds to make one copy of a diskette!.

Side two of the FLIPPER RamDesk Manager and support utilities contains the following support programs:

)/CATALOG

/FLIP

NAME	TYPE	BLOCKS	MODIFIED	CREATED	ENDFILE	SUBTYPE
*PRODOS	SYS	30	18-SEP-84	0:00	<NO DATE>	14848
*BASIC.SYSTEM	SYS	21	18-JUN-84	0:00	<NO DATE>	10240
*STARTUP	DAS	6	21-OCT-86	0:00	21-OCT-86	0:00 2230
*AMOD.BASIC	BAS	4	17-OCT-86	0:00	<NO DATE>	1304
*AMOD2.0	BIN	4	16-OCT-86	0:00	<NO DATE>	1166 A=51000
*AMOD2	TXT	13	14-OCT-86	0:00	<NO DATE>	5904 A= 0
*FILER	SYS	51	18-JUN-84	0:00	<NO DATE>	25600
*PREPARE.0	BIN	3	22-OCT-86	0:00	22-OCT-86	0:00 768 A=52000

BLOCKS FREE: 141 BLOCKS USED: 139 TOTAL BLOCKS: 280

Hey! What's this AMOD.BASIC program? It's there to enable you to modify the boot-side of your AppleWorks 1.3 & 2.0 diskettes so that they correctly use the FLIPPER memory as a desktop! But wait. Don't the Cirtech ads state that FLIPPER is compatible with the Apple memory card? That's true but Cirtech claim that Apple have not been following their own rules in the way that AppleWorks v1.3 and v2.0 access the ram memory. Although I have not fully checked that out similar things have happened before so I'm pretty sure Cirtech are right.

PREPARE.0 is a program to enable you to use a hard disk to store the 'FLIP' disk back-up images of Work areas. I must say that I've never considered a 'hard disk' to be a backup but perhaps times are changing!

RAMDESK WITH II GS

I have checked out the new software in Apple][plus, Apple //e, Apple //e,enhanced and Apple IIGS computers with excellent results. Some minor points are, however, in order:

1} If you are using an Apple IIGS with colour monitor be sure to select monochrome on the control panel first otherwise you will get colour fringing.

2} When checking the software on the Apple IIGS it worked perfectly with the graphics version of the RamDesk Manager. I did, however, occasionally get problems with ProDOS work areas with the text version of the RamDesk Manager that would not boot. This is a minor problem since one would hardly choose the text version when there is the mouse driven graphics version.


3} The RamDesk Manager software is remarkably resistant in that it is difficult to dislodge. So much so that even with four work areas you can still use your Apple for other disk based applications or games. Afterwards just pass control to the RamDesk Manager and select your work area.

4} Cirtech advise that if you are using AppleWorks you must use the first work area. I haven't bothered to find out why - who cares anyway? It's clearly no problem when AppleWorks boots up in less than two seconds.

CONCLUSIONS

With the introduction of the Apple IIGS and its huge memory capabilities ordinary ramcards might not seem too attractive. The FLIPPER with its work areas and the simple and rapid way in which those work areas can be restored and backed up to diskette will still be a very useful tool.

Perhaps Cirtech will, one day, introduce a 4 megabyte FLIPPER for the Apple IIGS. Just think of being able to flip to GS Paint in 5 seconds rather than the few minutes that the diskette takes! Also it takes less than 2 minutes to restore or backup an 800K work area using a 3.5" disk.

The text and graphics RamDesk Manager software is excellent. The graphics version with its pull down menus, Macintosh-like windows and mouse control are the icing on the cake! Look into the windows and there are yet further improvements: the restore/backup routines are twice as fast as the old (now 10K per second) and there is the ability to use other than 5.25" diskettes. 

RamDesk Manager software is supplied by:

CIRTECH (UK) LTD,
CURRIE ROAD INDUSTRIAL ESTATE,
GALASHIELS,
SELKIRKSHIRE,
SCOTLAND.

The author Dave Ward is the HotLine Co-ordinator and is a prolific writer on the Apple II range.



"I feel like I
can fly
now"

AUTOWORKS

Graham Attwood

I have been using AppleWorks for some time, and have generally found it works well enough in its three primary functions - wordprocessor, database and spreadsheet - but has always seemed to lack something in the area of editing and screen handling.

That is, until I was introduced to AutoWorks, a one-time patch program for AppleWorks that gives you a whole lot of new, useful features; once tried, you will never again want to use plain old AppleWorks!

Mouse driver

The first major advantage is that it works with a mouse, in fact any mouse - //c, //e or IIGS. No more fiddling with the cursor and Open-Apple keys to move around the page; just move the cursor with the mouse to the place you want to be, and carry on typing. If you want to go to a part of text not on the screen, you just start the cursor in the right direction, then press the button, and it zips along the same way until you let go. This mouse action also repeats the last key function selected, so you can delete backwards or forwards, or repeat a character, or just scan through the document.

In the Spreadsheet the mouse moves you quickly around the cells, and also is used to highlight blocks, columns or rows for formatting, deleting or copying. In the Database you can quickly run up and down the fields or between the records depending on which screen mode you are in. The mouse also controls menu selections, but the keyboard can be used instead at any time if it is more convenient.

Macro functions

A very useful feature of AutoWorks is the 'macro function' which makes use of the normally redundant Closed-Apple key (C-A) and any other keyboard character, including control keys. After pressing C-A and <key>, a macro is called from memory, and it carries out the string of commands as defined in the macro. This can be any sequence of legal AppleWorks commands - any of those you can type at the keyboard - plus several special ones defined by AutoWorks.

Macros can be generated in a wordprocessor file, saved to disk, and then automatically loaded when AppleWorks is booted. Alternatively they can be defined from the keyboard at any time simply by typing Open-Apple X (O-A X), which brings up a menu, select 'Record Macro', followed by the macro key you have chosen <key>, then the exact keystrokes are typed for the functions you want, eventually finishing with O-A X. To use the macro next time, you just press C-A <key> and it does it all for you.

The program disk comes with a whole set of macros already defined for you. Here are a few examples:

C-A	N	prints your name and address
	J	justify right and left margins
	Y	delete whole line (to clipboard)
	D	block delete (to clipboard)
	<esc>	undo deletion
	/	exchange transposed characters
	\	exchange transposed words
	Q	switch to next desktop file
	P	print file using defaults
	S	save file and remove from desktop

Mail Merge

AutoWorks adds a mail-merge function to AppleWorks (now included in version 2.0, but not in earlier versions) and involves creating a database file to hold the name/address details. The wordprocessor document then needs to have field number markers embedded in the right places; these are <#(number)> if the document is to reformat to the length of merged data, or <*(number)>..... if the field lengths are to be fixed, the length being the marker plus the periods. Once defined, the mail-merge is called from the O-A X menu; the document and database files should already be loaded to the desktop.

File Organiser

The other AutoWorks feature is a Read Disk option from the O-A X menu, which reads the directory of the currently logged drive into either a wordprocessor or a database file. The database file is more useful - there is a blank one already prepared on the AutoWorks disk - since you can then rearrange and sort the data to create a software index of all your AppleWorks (and ProDOS) files.

How did you survive without AutoWorks? Once you have experienced the combination of your own macros and mouse control you will never be happy without AutoWorks. It is still not quite the perfect enhancement to AppleWorks, for instance, the mouse is really only used as a cursor mover and does not have 'block select' and 'cut and paste' facilities that are common on Macintosh applications, (although these are available by combining keyboard and mouse actions). Being an AppleWorks patch it also cannot be used on the same system as one modified by the Pinpoint utilities as no doubt it hooks into the same areas of the program.

These, however, are minor criticisms of a really useful improvement to AppleWorks.

<i>product</i>	<i>AutoWorks</i>
<i>by</i>	<i>The Software Touch</i>
<i>available from</i>	<i>MGA Microsystems</i>
	<i>and other dealers</i>
<i>price</i>	<i>about £39</i>

KIDSTIME II

GS

Graham Attwood

A review

In the December edition of Apple2000 there was a review by Norah Arnold of Kidstime for the Mac. Great Wave Software have now released a version, called KidsTime II, specifically for the IIGS. This review has been done on a release copy of the program given by Great Wave to Irene Flaxman during her trip to San Francisco in January.

The Mac version consisted of a set of five separate programs - Dot-to-Dot, ABKey, Match-it, StoryWriter and KidsNotes. The first disappointment is that KidsTime II only has TWO of these ABKey and KidsNotes. Perhaps the others could not be translated from Mac to GS, but this seems an unlikely explanation since they were not particularly complex programs; neither can it be for lack of disk space. The GS has comparable (but not identical) tools to handle the screen operations and sound output - in fact the GS has better sound capabilities than the Mac - so it should have been possible to transfer all five programs, and add colour too.

ABKey

ABKey is an alphabet and keyboard learning module which can develop a child's understanding of the letters of the alphabet, and lead on to association of the letters with everyday objects. When started, the program begins in its simplest form of presenting an enlarged coloured letter on the screen, and the child then has to press the correct key on the keyboard for the letter to disappear. It plays a short musical 'tune' as a reward while it gets a new letter; a wrong keypress gives a suitable note of displeasure and the letter remains until correctly identified. *On the Mac version, the letter or word is SPOKEN by the computer, which is far more effective as it reinforces the connection between what is seen and its' pronunciation.*

The next level of difficulty is selected with the mouse from the menu-bar, and

adds lower case letters to those displayed. After a series of letters have been presented, the programs then displays all the letters of the alphabet on the screen in order one at a time; at the same time it plays a nursery rhyme. Further levels bring in pictures of objects and animals, the starting letter of the word being the required letter to be typed. There is an options menu which can change the speed of the program and the number of letters/objects displayed at a time.

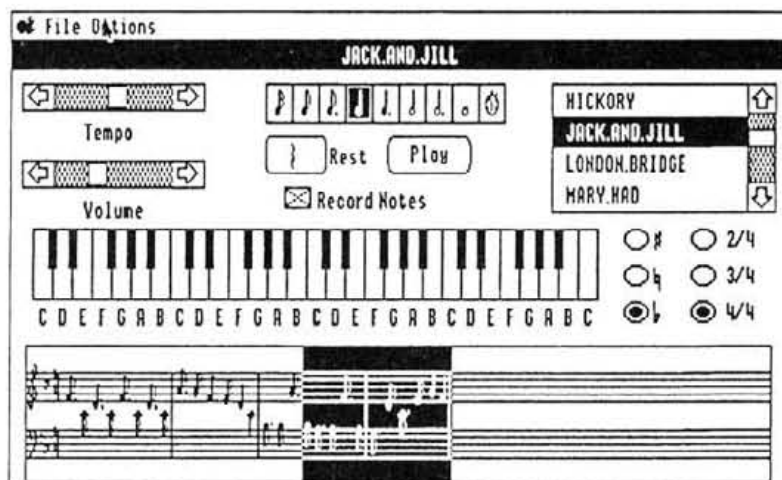
KidsNotes

KidsNotes is a simple music composer and player, and shows a piano keyboard and stave on the screen with various selectable note lengths, clefs and

Despite the criticisms, these two programs can still be a valuable aid to learning and with guidance from a parent or teacher the programs can help children in the 3 to 7 year-old age group to learn about letters and words, and about the way music is composed and written. It is a pity that Great Wave have not made better use of the GS, and in comparison with the earlier Mac version they only rate two out of five for content, and two out of ten for effort!

IIGS comment

Another problem, and not the fault of Great Wave, is that the programs should be selectable via the IIGS 'Finder', except that Finder has yet to be released from Apple. The alternative used on this disk is to load from the 'Program Launcher', which is OK for simply running programs but less convenient when it comes to any disk file handling. Hence, because you have to rename a file if you want to Save data (as part of the 'safety lock' that stops little Jimmie from trashing the disk), this is achieved by going into ProDOS's System Utilities - not a friendly place for the unwary. So a gentle word of warning to those buying



signatures, and slider controls for tempo and volume. The disk contains quite a list of nursery rhymes and popular tunes, each with about ten or so bars, which can be loaded to the screen stave and played or modified with the aid of the mouse.

New tunes can be built up note by note once the basic mouse control skills have been learned, and the result saved to disk if the 'safety lock' is disabled; this needs the intervention of an adult. There is a 28 page manual which explains the musical terms in some detail, and describes how a child can be taught simple composition.

software for the new machine, check if you can that it makes use of the correct drivers and tools - there is always a temptation for software houses to promote programs before they are fully supported - and make sure that there is an easy (and cheap) upgrade policy from the supplier to take advantage of bug-fixes and program enhancements. 🍏

This is not at present available in the U.K. but should be in the near future.

Keep out of the Red with

BOOKKEEPER II

Do you have a problems with keeping your accounts or require management analysis figures to assist in keeping a better financial control of your accounts?
Then this program is for you.

What is BOOKKEEPER II ?

BOOKKEEPER II is a simple-to-use, easily learned, reasonably priced method of keeping business books and control of expenditure and petty cash. Whilst practice makes perfect this program can be approached with confidence by someone who has never previously used a computer or has no "in-depth" knowledge of accounting, as simple non-accounting terms and instructions are used throughout the program. The program has been designed to keep a straight-forward, no nonsense record of a small business accounts, hence the name **BOOKKEEPER**. The **II** part of the name is because it runs on the Apple // range of computers.

What are the features of BOOKKEEPER II ?

It can be used as a simple Cash Book by just entering the Cash In and Cash Out transactions to and from the Bank or Petty Cash accounts. If the Sales and Purchase control accounts are used then the outstanding debtors and creditors can be seen at a glance. There is the facility to produce VAT and Trial Balance reports, which can be used when completing VAT returns or to show profitability. Standing Orders can be stored for automatic entry to the Bank account and statements can be produced for any account, which will prove especially useful when reconciling the Bank account.

Who will use BOOKKEEPER II ?

Small Businesses that wish to have a simple way of keeping accounts themselves, and have problems because of lack of time or even lack of understanding of accounts. Accountants who require an incomplete records system in order to produce a Trial Balance. Also large organisations can use the program as a Cash Book, for Petty Cash or for Trial Balances if used in conjunction with their Sales and Purchase Ledgers.

What is required to run BOOKKEEPER II ?

An Apple //GS, //c or //e with an 80 column card. A minimum of two 5.25 inch floppy disk drives or one 3.5 inch Unidisk. The program will also run on any hard drive that supports ProDos. A printer with a compatible interface in slot one is useful although not mandatory as all reports will print to the screen.

What are the limits of BOOKKEEPER II ?

The program will handle up to 99 Cash Book accounts, 400 Sales and Income accounts, 499 Purchase and Outgoing accounts and 30 Standing Orders. As many as 32,000 transactions can be stored providing the data storage volume is large enough. As a guideline a 5.25 inch floppy disk will hold about 925 transactions per period. A 3.5 inch Unidisk will hold about 9,370 transactions or 8,600 if the data is stored on the program volume. Monetary values may be used up to £9999999 in all entries.

What is the price of BOOKKEEPER II ?

£99.00 plus VAT.

This includes a comprehensive manual, with the program supplied on both 5.25 and 3.5 inch floppy disks.

Where can I buy BOOKKEEPER II ?

From your local authorised Apple Dealer or

Advanced Micro Products Ltd.
200 Court Road - London SE9 4EW
Tel. No 01 - 851 3311.

Apple, ProDos, Apple //GS, Apple //c, Apple //e
are trademarks of Apple, Inc.

SPECIAL RELEASE SOFTWARE LIBRARY

NEW TITLE

SR15 - CLASS MARKS by Tony Game

A School and College Administrative Aid

This program is designed to help the teacher prepare and store records of subject performance marks. Lists can be edited and sorted to any field or even alphabetically if desired. The lists can be printed out as required. There is a facility to standardise the marks to a common mean and standard deviation. Indispensable for the busy teacher. Requires any Apple II+ with one disk drive.

Price £14.50 inclusive of VAT and P&P

Full List of Special Release Software

SR6 - SUPER TRACE

High speed de-bugging of Applesoft programs. Allows screen display of program lines and the values of variables, while the program is running.

SR7 - SUPER EDITOR

List and change occurrences of commands, variables, functions or strings in Applesoft programs. Clean up your programs, and find elusive variables.

SR1 - APPLESOFT SCREEN EDITOR

On screen editor for Applesoft. Allowing fuller editing than is normally available. Global find and replace, renumbering of individual lines, insertion and deletion of lines and lower case input.

SR12 - PACKING SUITE

Unpack Applesoft lines having more than one statement to make editing easier. Then pack them back again for faster working and less memory overheads. Strip REM's to shorten the program. Will clean up and streamline finished programs.

SR8 - SYMDIS

A symbolic disassembler for 6502 machine code. This will create a standard text file from any machine code program or defined area of memory. The resultant file can be then altered and reassembled with your own standard 6502 assembler. Assembler not included.

SR13 - BUSINESS BASIC

A 40 column orientated extension of Applesoft. It requires a 64K machine, or a 16K language card. Allows the formatting of numbers, custom tab fields, bi-directional scrolling, fast handling of arrays to and from disc etc.

SR3 - GRAPHIC PAD

Allows you to produce Hi-Res graphic pages, pictures and text, quickly and easily. Requires at least a pair of paddles, but preferably a joystick should be connected. Illustrate games or other programs.

SR5 - PRESTEL DRIVER

Access Prestel and Micronet with your Apple. You will need to have either an Apple Super Serial Card or a SERCOM II Serial card, and of course a modem capable of 1200/75.

SR14 - D.A.M.P.

Set up your own personalised data-base, and print the results as needed. Records are screen orientated, and may be set up to your own requirements. A full set of utilities are included for general house-keeping etc.

SR2 - CLUBKEEPER

A suite of programs to allow the keeping of a club or society database. Requires a Z80 softcard. There are five main areas to the program, accounts, membership, stock, diary and staffing.

SR4 - HELICOPTER RESCUE

Simulation game. Requires paddles or joystick. Rescue as many people as you can, while avoiding the seagulls.

SR11 - THE EXAMINER

Trace and single step through 6502 machine code DOS 3.3 programs. Allows the quick discovery and cleaning up of coding problems. Will display on 40 or 80 columns

SR15 - CLASS MARKS

Comprehensive program to prepare and print lists of marks. Sorting to different fields or alphabetically. Full updating and editing facilities included. Standardise routines built in.

SR9 - SPEEDLOADER

Our amazing offering from Cornelius Bongers and Wilhelm Schouten. Allows the loading of any program, memory dump or DOS, at up to 10 times the normal speed.

You prepare a working disc from this master program, and then stand back in amazement. The drive often takes longer to zero the head than it takes to load DOS and run the program.

SR10 - CHAMELEON

The Chameleon is an extremely powerful file conversion program. It allows the free transfer of all filetypes between various system discs. The program is designed to be very user friendly and only needs a few keystrokes to operate.

The option is given to change the filename if required. A special options facility allows the forcing of destination file types, this allows the making of Binary from Text files etc. Handles PRODOS, DOS3.3, PASCAL, CPM and SOS discs.

Prices

Speedloader and Chameleon	£16.00
Special Release Software	£14.50
All prices include VAT and P&P.	

All software comes with a complete instruction manual. The extensive manuals for Speedloader and Chameleon are in Applewriter II text-file form on the back of the discs, but there is a 'reader' program that will dump them either to screen or printer. All other discs have the current software library catalog on the reverse. 🍏

The Macintosh Pages

MacCHAT



Edited by Norah Arnold

Sustained, concentrated work on visual display units (VDU) and intensive close work contribute greatly to failing eyesight, headaches and eyestrain.

A new vision therapy system has now been developed, using laser light, to automatically relax the ciliary muscles of the eye. Tests have shown that over a period of time eyesight can be improved and eyestrain relieved.

The Bio-Laserspec has been designed by Professor Paul Cook, a laser scientist and visiting lecturer at Brunel University. Cook started working with lasers in the 1960's and is now managing director of Scientifica-Cook Ltd, a company specialising in building lasers and research instruments. In 1985 the company launched the Laserspec - a machine which allows people to test their own eyesight. After further research it was found that eyesight could actually be improved and symptoms of eyestrain relieved. In January 1986 the first Bio-Laserspec was produced.

The Bio-Laserspec has been designed specifically to help individuals either improve their failing eyesight or maintain their good eyesight. It consists of a small box with a display screen. When operating, a speckle pattern is displayed on the screen and the user is required to sit and watch the pattern. A granular pattern, produced and presented from a small slowly rotating drum, is superimposed on laser light. A helium-neon laser is used and the red speckle pattern is seen as interference on the retina.

People with good eyesight will see a red and black stationary speckle pattern. Myopics (short-sighted people) focus in front of the retina and they will see the speckle pattern moving downwards. Hypermetrops (long-sighted people) focus behind the retina and they will see the speckle pattern moving upwards. The speed of the speckle pattern is directly related to the degree of the eye defect, so a user with a strong prescription for myopia will see the speckles moving

very quickly down the screen.

Sessions on the Laserspec should be limited to 15 to 20 minutes each day, and it is only after the third day that the user should try and concentrate to make the speckles slow down and ideally stop. The technique is automatic, by mentally working on the speckles and trying to slow them down the user is exercising and so relaxing the ciliary muscles.

In a recent study by a group of scientists from the University of Uppsala, Sweden, a variety of subjects were tested to analyse their accommodative ability - the ability to intentionally relax the ciliary muscles. It was found that the subjects with progressive myopia (they have updated their prescription more than once in the last three years) had little accommodative ability and in some cases it was nonexistent. The study concluded that progressive myopics, especially those engaged in VDU work, should take preventative action to alleviate eyestrain and related symptoms.

Scientifica-Cook hope that the Bio-Laserspec will be used by people, especially those in the high risk group and VDU operators who may suffer from eyestrain and headaches. If you would like more information, it may be obtained from Anthony Follmi, Scientifica-Cook Ltd, 78 Bollo Bridge Road, Acton, London W3 8AU, Tel: 01-992-0268.

GraphicWorks

Mindscape are releasing an upgrade to GraphicWorks, the low-cost page layout program first released as ComicWorks which was reviewed in the last issue of Apple2000. GraphicWorks has now been enhanced to give owners even more creative power. It now supports the new generation of high resolution scanners and has new features such as on-screen rulers, colour printing, rotation, perspective, skew and distortion tools. It also supports PageMaker™ versions 1.2 and 2.0. Registered GraphicWorks owners in the U.S.A. are being offered the upgrade for \$19.95.

Microsoft Upgrades Word 3.0

Word version 3.0 is described as a document processing program. Commonly used functions like scrolling, saving and printing are significantly faster than in earlier versions - they could hardly be slower. Word 3.0 includes an integrated outliner which allows the organization of ideas and the reorganization of lengthy documents. Documents may be formatted quickly and consistently using integrated preformatted style sheets and the styles may be defined or modified as the document is created.

Page preview gives on-screen viewing of headers, footers, margins and page breaks of two entire pages. The page format can actually be changed on the page preview screen and the changes are reflected in the main document.

Length of menus is flexible, choosing Short Menu gives menus listing only the basic features for casual users. The short menus are rather like those of MacWrite. A single keystroke gives access to Full Menu and the more advanced functions, including outlining, style sheets and Quick-Switch. The menus can also be customized to short cut the most used commands.

Documents may contain data in the form of text, bit-mapped graphics, object-oriented graphics, formatted numerical tables and equations. Quick-Switch means that one command key can be used to access and return from other applications.

A conversion utility is included for IBM Document Content Architecture and several other common applications are supported by two way data conversion. Columns may be manipulated by moving, deleting, sorting, and the use of five mathematical functions.

Text and graphics may be laid out in multiple snaking or side-by-side columns. Embedded PostScript fully supports the LaserWriter. The spelling checker includes an 80,000 word dictionary.

Word 3.0 comes on an 800K disk,

requires a minimum of 512K memory, and the list price in the U.S.A. is \$395. A copy on two 400K disks can be obtained by owners from Microsoft free of charge. Registered owners will be able to upgrade and the upgrade price will be less if they purchased after October 1st, 1986.

BASIC Compiler

BASIC Compiler is a compiler for programs written in Microsoft BASIC. Key features include:

- Block IF / THEN / ELSE / END statements
- SELECT / CASE statements
- Fully recursive subprograms that can accept passed parameters
- HFS support
- Full support of 1MB or more of memory
- Support for the LaserWriter

A Toolbox Library, from Clear Lake Research, accompanies the compiler. This library includes over 140 routines to make it easier to access the Mac Toolbox ROMs. Using the compiler, standalone programs can be created and distributed without paying runtime fees and without requiring users to have BASIC in order to run them. List price is \$195 and this product will run on a 128K Macintosh.

BASIC Interpreter

BASIC Interpreter 3.0 is a new version of the BASIC interpreter. Like the Compiler it supports Block IF/THEN/ELSE/SEND statements, HFS, 1MB of memory and the LaserWriter. It also comes with the Toolbox Library. List price is \$99 and registered owners can upgrade for \$25. This interpreter will run on a 128K Macintosh.

Excel 1.03

Excel version 1.03 is a new version of Excel that supports the MC68881 floating-point coprocessor, expands linking capabilities and is not copy protected. A new version of Switcher is also included that supports HFS and large screen monitors. With the expanded linking capabilities, spreadsheets residing in different folders can now be linked.

Version 1.03 will automatically detect the presence of the MC68881 and use it to perform all calculations.

Excel version 1.03 is available at no charge to registered owners who purchased Excel after September 1st, 1986. Registered owners prior to September

must pay \$25.

All the above information has come from the U.S.A.; Microsoft Corporation, 16011 NE 36th Way, Box 97017, Redmond, Washington 98073; (206) 882-8080.

Models with Toy Shop

With a computer, a printer and The Toy Shop from Broderbund, you can create a steam engine, a roundabout, a jet dragster and many more, giving a total of 20 marvellous mechanical models made from paper, that really work.

The Toy Shop's software is easy to use and contains the detailed designs needed to build all the models and toys. You simply choose a project from the on-screen menu, then give that project personality by adding custom patterns, graphics and text. For instance you are able to emblazon a name on the balloon powered jet dragster, or display a motto on the medieval catapult. Homemade decals can be placed on the toys by using your own imagination to produce graphic designs or by using clip-art designs.

Once the model has been customized, you can print the parts and mount them on special adhesive card included in the package.

The next move is to roll up your sleeves and get started on the model. The Toy Shop includes supplies to get started, such as wire, wooden dowels, rubber stripping and balloons.

Using the Toy Shop to produce the models means that an unlimited number of each model can be made, each customized in a different way. The fun is not over once the model is assembled because every model does something, from soaring into the air, to floating on the head of a pin.

The Macintosh version of The Toy Shop is priced at £54.99 and can be obtained from MGA Microsystems; tel: 05806-4278.

MacFill-In

The office of the future may be paperless, but in the meantime employees in many businesses still spend valuable time filling out forms. MacFill-In™, a new Macintosh program from Cognitive Concepts, can speed up the process by allowing users to create forms that can be quickly filled in from the keyboard.

MacFill-In automates business form processing by converting any MacPaint image into an on-line data entry form. It has a Smart Scan feature which

automatically recognizes blanks and fill-in boxes. When filling in the form users can move quickly from blank to blank using the Tab key or go to any blank on the form with a click of the mouse. Selected blanks can be automatically filled in with the current date or time, with sequence numbers, or with user-supplied "default" values. MacFill-In can handle calculated blanks quickly and accurately. Once completed, forms can be saved on disk for on-line filing, or can be printed for applications where a paper copy is required.

You need a Macintosh with at least 512K running a Finder version 4.1 or later in order to use MacFill-In, which has up to 255 blanks per form and full selection of Fonts, Sizes, and Styles for printing each blank.

To help you get started MacFill-In comes with 18 standard business forms, including Cash Receipt, Purchase Order, Invoice, Work Order, Statement, 2nd Notice, Final Notice, Credit Memo, Sales Slip, Correspondence Log, Expense Report, and many more. MacFill-In is \$39 and more information can be obtained from Cognitive Concepts, 1219 Phelps Avenue, San Jose, CA 95117, telephone (408) 243-6886.

File Transfer

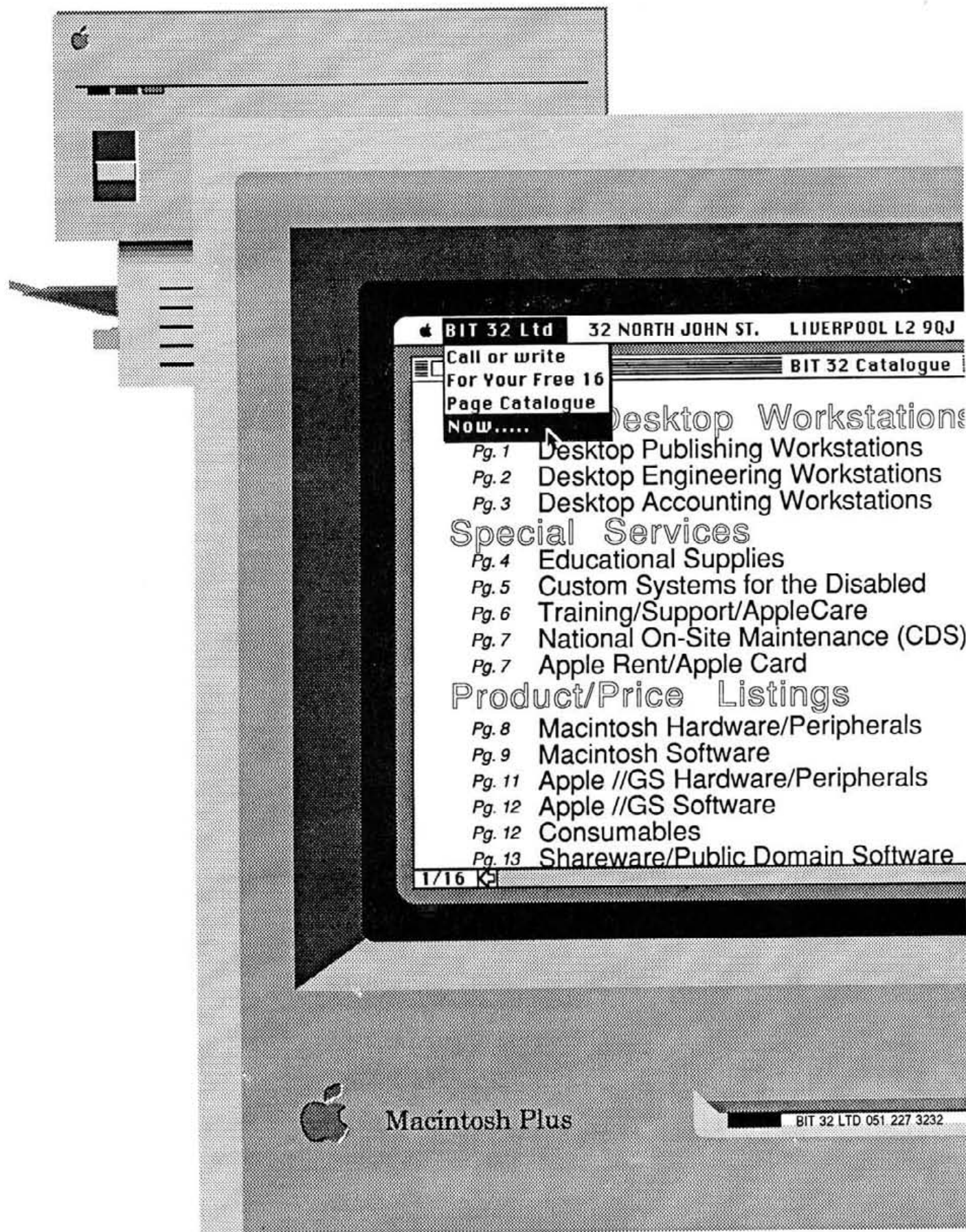
FT100 is a file transfer product that allows MS DOS data files created on an IBM PC or compatible to be easily transferred to a Macintosh, or vice versa. FT100 has a file conversion filter utility that preserves underlining, bold style and other formatting characters.. It connects to either the serial ports or the SCSI port on the Macintosh. Data files from Lotus 1-2-3, WordStar or dBaseIII can be transferred to Macintosh files by clicking the mouse. No knowledge of MS DOS commands is required. FT100 includes a 5.25 disk drive, Macintosh software, documentation and the cables. List price is \$595. The optional file conversion filters are \$95. FT100 is a product of Danya Communications, Inc. 50 Main Street, Salt Lake City, Utah 84144; (801) 531-0600.

Articles

If you have any articles for the Macintosh pages please submit them on disk, preferably in MacWrite files, to Norah Arnold, Macintosh Editor, Apple2000, P.O. Box 177, St. Albans, Herts, AL2 2GE, or send email to N. Arnold Force ID BSG009. All are welcome.

BIT 32

THE DESKTOP COMPUTING CENTRE



LASERWORKS™

by John and Norah Arnold

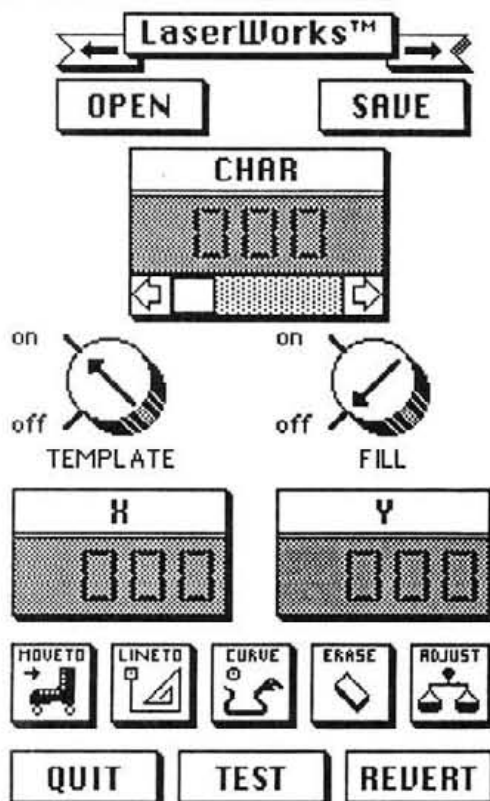
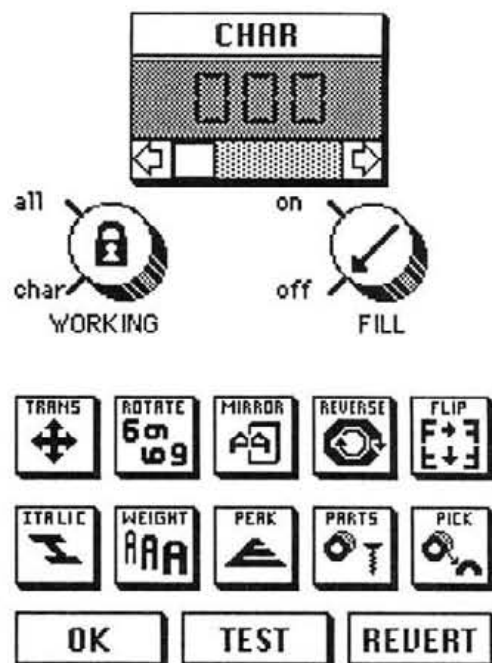
Do you need to create your own fonts for the LaserWriter™? If you do, then LaserWorks™ may be the program for you. LaserWorks is advertised as a 'complete graphics workshop for your LaserWriter' and it claims to give designers the ability to create high resolution fonts and graphic characters. Laserfonts, Screenfonts, Laser Dictionaries, User Dictionaries and even special laser 'Parts Files' can be created, edited and enhanced from within LaserWorks.

When starting to use your LaserWorks™ it is advisable to do as the manual suggests and work steadily through the first tutorial which, if you do everything, takes about two hours to get through. Experienced users of the Macintosh™ would probably be able to complete it much faster than this by reading, but not necessarily doing, everything. Help screens, character display, moving in and out of the edit window, MoveTo, LineTo, CurveTo, Erase, Adjust, Revert, Grid Mode, Insert Mode, filling, templates and the testing of the character which

The main screen is shown below with the Chicago font loaded so that a character may be chosen in order to be used as a template.

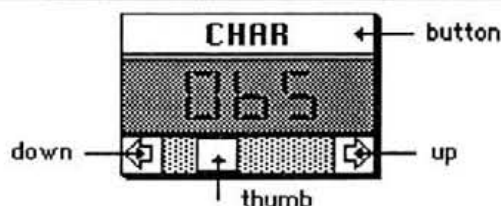
On the right is a dump of the 'Goodies' selection panel. This is obtained by clicking the right pointing arrow of the LaserWorks banner in the main screen. The Goodies tools are easy to use to change the character you have created, but if you need quick help, just option click on the tool in question.

Goodies

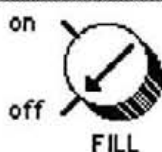
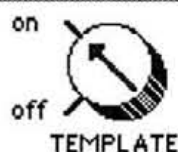


Chicago		0	@	P	`	p	Ä	ê	†	∞	z	-	
	⌘	!	1	A	Q	a	q	Ä	ë	°	±	i	-
	✓	"	2	B	R	b	r	Ç	í	¢	≤	~	"
	♦	#	3	C	S	c	s	É	ì	£	≥	√	"
	⏏	\$	4	D	T	d	t	Ñ	î	§	¥	f	'
	%	5	E	U	e	u	Ö	ï	•	μ	≈	'	
	⌘	6	F	U	f	u	Ü	ñ	¶	∂	Δ	÷	
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)	9	I	Y	i	y	â	ô	©	π	...		
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	/	?	O	_	o		è	ü	ß	ø	æ		

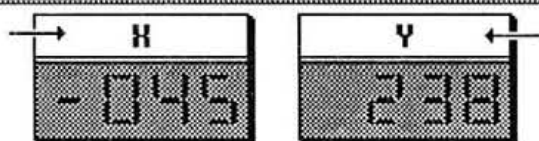
The Powerful Editing Commands of LaserWorks™



The Character Display allows the choice of the character to edit and always displays the present character number.



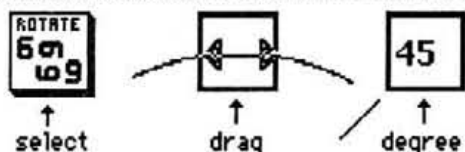
Clicking on this knob will turn on and off Templates or traceable images, but only if you have first loaded a screen font to use as a template or pasted a picture from the scrap book. Turning the Fill knob will fill the image with black, an aid to visualising the final printed result.



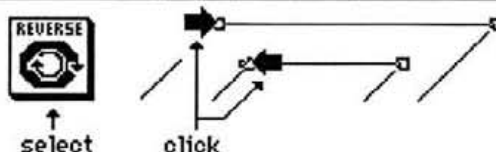
These Position Displays give the exact location of the current point in the coordinate system. They are very useful for exact work. Clicking on the X or Y button will set 'Position Test Mode'. Next click on any arrow, circle or square, will display the coordinates of the point.



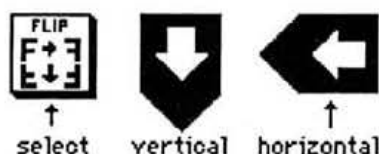
These buttons are self-explanatory to some extent. When you click Move To, you have the moveto cursor which is the arrow with a rollerskate at the end. Similarly, the other buttons have their own cursors so that you can easily tell which mode you are in. Bezier curves, defined by four points, are used in LaserWorks. The first and last points define the beginning and end of the curve, while the middle two points are 'control points'.



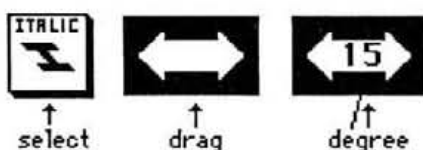
The Rotate button is used to rotate any object around its centre, for instance a 6 could be changed into a 9. Because Rotate mathematically changes the character, it takes a little time to work.



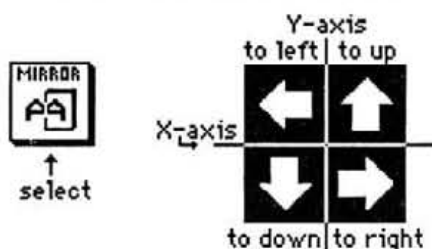
The 'Reverse' function is used to reverse the direction that the splines were drawn originally. If you wish to draw a white area inside a black area, then the outer shape must be drawn clockwise and the inner one anti-clockwise.



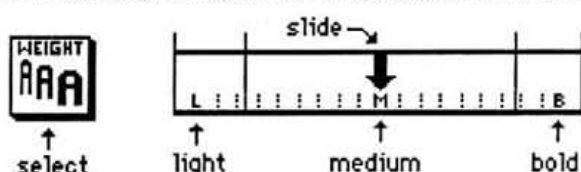
The 'Flip' function does exactly what it says. If you click on the left arrow it will flip horizontally, while clicking on the down arrow will flip vertically.



The 'Italic' button is used to slope the character or graphics in either direction. If you drag the arrow control to the left or the right, the degree of slope will appear in the arrow. It will also draw a guideline to indicate the slope.



This function mirrors a shape across any axis. The left and right arrows drag the Y-axis and the up and down arrows drag the X-axis. Curves are not always 100% accurate.



The 'Weight' function will allow selection of light, medium or bold by dragging the slide on the ruler. The divisions on the ruler are 5% per division, to a maximum of 50%.

you have created, are all items covered in part 1 of this first tutorial. Testing the character means sending it to the LaserWriter so that it can be seen at LaserWriter resolution rather than screen resolution.

Clicking the 'Test' button prints the character in several sizes and at the same time automatically saves it as a 'character file'. The name of the character file indicates the character position, ie. char_006, and is given a special character file icon. Reloading that file will mean that the character is loaded into the correct position in the font, ie. number 6. If another character were to be tested in position 6, then the new character would replace the previous one unless the name of the character file had been changed. This is obviously something of which one needs to be aware, and is documented in the manual.

Part 2 of the first tutorial goes on to show how Macintosh screen fonts may be used as templates to trace over. The manual is quite helpful in that it gives explanations of all the new terms used, so that if the user is unfamiliar with the difference between a screenfont and a Laserfont they can soon become fully conversant with all the details.

The user is also taken through the process of saving a font to a Laser Dictionary. Laser Dictionaries contain all of the formulas the LaserWriter needs to keep in memory in order to generate a design or character that you have created. The special Laser Dict file which is created by LaserWorks may be transmitted to the LaserWriter and will be retained in the printer's memory until the power is switched off. The size of a Laser Dict file is variable, it being possible to save a file containing only one character.

Tutorial 2 concentrates mainly on the Goodies mode from which your characters may be enhanced or edited.



When in the Goodies mode it is essential to bear in mind the position of the Working Knob. The Working Knob controls whether you are working on one single character or graphic item visible on the screen, or whether you are working on all the characters or items in the current file. If the Working Knob indicator is set



to all, then every change which you make to the single visible character will affect all the characters and in effect be a global change. In the diagram the knob is shown locked.



select

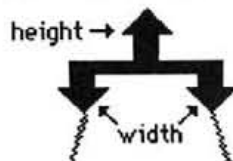


cursor

The use of Translate is also covered in Tutorial 2. The Translate function allows you to position the character to exactly where you wish after it has been created in a fixed position in the editor. Moving the lines in the edit window does not give the same result as translation, because it does not alter the position of the character in relation to the zero X and Y axes.



select



Another interesting feature of the Goodies mode is the Peak function, which may be used to create perspective. Peak really contains two functions in one, as the UP arrow used alone is really a scale Y.

Peak is used to stretch characters vertically without affecting the sides of the character, or to pinch in the top of the character, or to do both. Dragging the up or height arrow will stretch or shorten the character, changing the height. Dragging either of the down arrows in or out will cause the top of the character to narrow and be pinched at the top, creating the peak effect.

Two other most interesting features available from Goodies mode are 'Parts' and 'Pick'.



Clicking on the Parts button or using Command P will open the Parts Pad which is very similar to the Apple menu Notepad in the manner in which pages are flipped. There are 20 pages in the Parts Pad and it can therefore hold 20 parts.



select



first point



last point

The Pick function is used for picking up parts of a character which then are placed on the clipboard and from there may be pasted into the Parts Pad. Files of Parts may be saved for later use.

This facility for reusing, recombining or transferring partial paths across characters and files is one of the most useful features of LaserWorks. The LaserWriter cannot accept any object greater than 500 single numbers and this means that a limit of 150 commands is imposed in designing a single character or graphic symbol in LaserWorks. Their solution to this in-built limitation is the use of parts, each of which has its own 150 command limit.

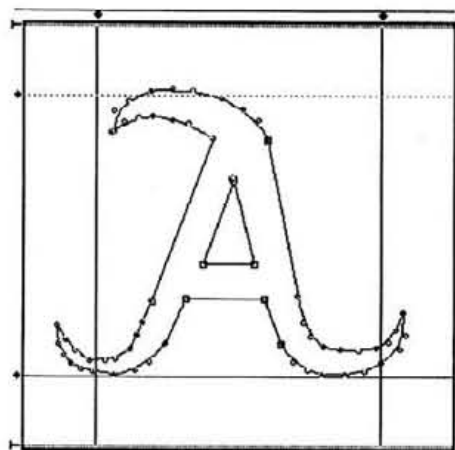
Conclusions

LaserWorks™ is heavily copy protected. This fact first impinges on one's consciousness on first booting the Master disk. The drive moans and groans as the Macintosh tries time after time to read a certain track, always needing at least four goes at it. This wouldn't be so bad if it always got what it wanted, but it doesn't. It is absolutely infuriating to be told "You seem to be having trouble with your disk, please insert your Master Diskette" when your genuine Master disk is sitting there in the drive in front of you.

The only menus available on the menu bar are the Apple and Edit menus. All the options and modes of LaserWorks are obtainable from buttons or knobs on the screen. This means that just about half of the Macintosh screen is always in use for the various option buttons, knobs and character selectors.

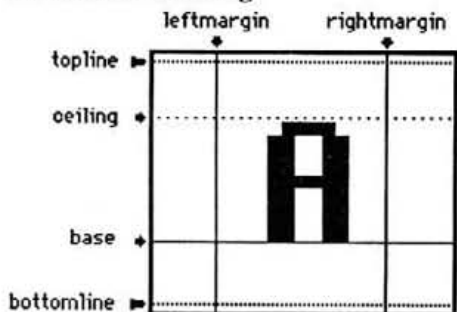
The program is quite enjoyable, even fascinating, to use. Both of us however,

How Characters are Drawn in LaserWorks™



The diagram above shows the 'splines' for a letter A which was drawn quickly without a template in order to be used as an example.

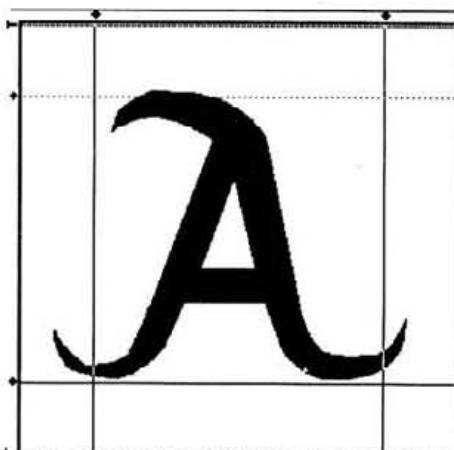
Whenever the LaserWriter draws a character the character is made up from a list of PostScript™ language commands such as MoveTo, Lineto and Curveto. The list of commands defines the exact shape of the outline of the character and in LaserWorks terminology is called a 'Spline'. Printed on the LaserWriter the results look just as good in any size and do not need redefining.



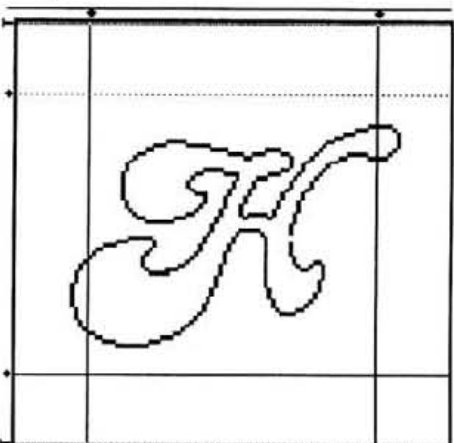
This letter A is shown in the 'Edit Window'. It is in this window that most of the work of designing or editing the characters takes place. All the lines shown in the diagram above are able to be moved about and adjusted and each of the lines has a different effect on the characters drawn.

The left edge of the character is set by the left margin and becomes the zero X-axis. The distance from this line and the first MoveTo, will define the space between this character and another character on the LaserWriter. The full character width is defined by the distance between the left and right margins. The baseline is common to all characters and sets the zero Y-axis.

The topline, bottomline and ceiling are only guidelines and do not affect splines.



When you turn the Fill knob on the splines which you have drawn will be filled black and solid. This black fill is only an aid and is never used by the LaserWriter which is only concerned with the shape of the splines and will always fill them automatically. Filling can help you to see whether or not your shape is complete.



If you have an interesting shape in a MacPaint file which you would like to use as a template to help you design a LaserWorks character, this can be done with the help of the Edit menu.

First the portion of graphic must be copied from the MacPaint file into the scrapbook. Using Multi-Scrap this can be opened from within LaserWorks, placed on the clipboard and then pasted into the edit window.

The graphic can then be used as a template around which splines can be built. This is not as easy as it sounds and the results are usually not satisfactory to start with, although one does improve with practice. The splines and the template remain completely independent of each other and once it has served its purpose the template may be removed.

found that the program reacted too slowly to the mouse on occasions. This was most noticeable when drawing splines as making successive clicks of the mouse too quickly meant that one point could be moved to the position of the next as the second click came before the point was 'fixed'.

An enlargement feature or zoom is now present in version 1.2 and this was badly needed as it was extremely difficult to use the curve tool, which requires the placement of four points in all before a curve is drawn, in earlier versions of LaserWorks. For example, in the region of serifs a considerable number of points may need to be crammed into a relatively small space and it is almost impossible to select a point and readjust its position to get the line of the curve correct without resorting to the zoom mode.

The character grid is not labelled and although the number of any selected square appears in the CHAR box we felt the grid itself could have some guide numbers along the edge.

The LaserWorks manual is extremely well produced and pleasant to use. The three tutorials are followed by a reference section. We found the manual helpful and it contains all the information necessary to be able to produce LaserWriter fonts that can be downloaded and used.

It has been impossible to touch on some of the more intricate features of the program particularly those used from the Laser Expert screen. The Appendix giving details of the user-modifiable PostScript code used to generate the LaserWorks Test routines was most interesting.

LaserWorks may not be all that easy to use but it is cheaper than Fontographer so should not be overlooked when buying. It would certainly be improved by the removal of the copy protection. If the disk is read at one point over and over again it won't be long before that area gives problems. LaserWorks can only be used with a LaserWriter and I am sure that those who can afford a Laserwriter would be willing to pay for their LaserWorks™.

Program: LaserWorks™
 Publisher: EDO Communications
 Hardware: Macintosh 512K or Plus
 Price: £275
 Obtainable in U.K. from
 MacSerious
 17 Park Circus Place
 Glasgow G3 6AH
 Tel 041-332-5622

LET'S RIP OPEN THE MAC

by Cliff Wootton

Why Bother?

I have had my Macintosh for around two years now and it has taken that long to really get down to learning about its insides. I remember in the early days of the Apple II series when it was fairly routine to pop into the monitor to do something that you could't do from Applesoft or Integer BASIC. With the Macintosh you are removed so far from the hardware and the internals that you never seem to need to work at this level. On the other hand, guys like Andy Hertzfield obviously know the inside of the Macintosh as well as the rest of us know our trusty old Apple II's.

As soon as I could afford it, I bought the Inside Macintosh book from the reprographic company in Hemel Hempstead that Apple UK had sub-contracted the printing and distribution to. This book is LARGE. In reading it, it appears that there are huge amounts of information missing (to be added at the next draft) but some info is better than no info. Then along came a supplement to the manual. In fact the supplement had already been included in my copy of the manual anyway. Eventually what was supposed to be the final supplement arrived and was bound into the rest.

From an in depth study of this book, it appears that you must have a Lisa (or Macintosh XL) to develop software in Lisa Pascal. This is un-reasonable and so Apple have included some notes for assembly language programmers. Well it helps but not much.

Thinking back to my early days of learning about the Apple II, I remembered that I learned most by disassembling the DOS and BASIC machine code. Would this perhaps be a realistic way to learn about the Macintosh insides?

Well by this time, I had a large collection of software tools for the Macintosh from various sources. The following, I think are vital if you are intending to rip open the Macintosh to see what makes it tick:-

- REdit
- ResEdit
- R Mover
- Fedit
- BinHex
- BASIC or some other language with file access

With the resource tools, you can inspect the contents of the resource forks of any file and with Fedit you can look at files or volumes on a byte by byte basis. BinHex is useful as it transforms resource files into a form in which you can get at them with other file access methods. However, BinHex will also convert control codes etc so that the file can be uploaded or downloaded by means of a bulletin board system.

Before diving into the technical stuff, I will cover some of the basics for those of you out there who have not studied the Macintosh software architecture yet.

You will know of course that a file is a collection of characters stored together and referenced under a single file

name. This is also true in the context of a Macintosh file. However, there is an additional collection of characters almost like another file that is also connected to the same file name and directory entry. A Macintosh file is therefore in effect a pair of Siamese twin files.

The first file fork is referred to as the data fork and is the one that you will access when you OPEN a file from within (Microsoft) BASIC. It is often used by applications to store the raw data associated with the application. Hence a text editor might write the text in the data fork of its document files.

The second file fork is referred to as the resource fork and is in fact a collection of objects called resources. To some extent, this resource fork behaves as if it were a sub-directory since individual resources can be loaded, saved created or deleted much like files in a normal directory. If any of you have used the VMS operating system on a DEC VAX you will be familiar with the concept of Library files. These are very similar to the resource forks of Macintosh files except that VMS Libraries only collect together modules of the same type.

Applications on computers like Apple II systems typically were monolithic chunks of code and data collected together into a single file. Not so in the case of the Macintosh where the application machine code is stored in resources identified as being of type 'CODE' whilst other parts of the application (prompts for instance) are stored in other resource modules. From this you can see that disassembling a Macintosh application relies more on the knowledge of Resource types and their formats rather than 68000 machine code disassembly techniques. In fact to port an application to another computer perhaps with a different microprocessor, only the CODE resources (and those that contain CODE fragments) need be modified. The code replacement becomes less difficult if the Apple standard subroutine packages built into the Macintosh operating system have been used.

At the time I started ripping open the System File, the only means of programming I had available was the Microsoft BASIC (version 2.00) on which I based the alpha version of Res Ripper. This program will open the resource file (once you have swapped the data and resource forks with FEdit) and extract the resource map and disassemble the individual resources. The design allows new resource types to be added to the program since the individual resource disassemblers are handled as overlay program, segments. I have at present identified 70 different resource types within the Apple documentation and in the alpha test version have completed all the overlays required to rip open the System File. In working through this project, several points have become clearer about the resource fork all of which have implications for the application programmer in general and the Microsoft BASIC programmer in particular. I have summarised the most important ones below:-

- Microsoft BASIC cannot open resource forks directly.

- Apple have broken the rules regarding resource structure here and there, in particular in the System File.
- Inside Macintosh (in the two binder form) is now quite out of date in terms of resource types. Also from the point of view of the new machines Mac Plus etc.
- Macintosh has been designed primarily with the Pascal programmer in mind even though the assembler interface is very good it is documented only as an alternative.
- There is no reliably documented and complete list of resource types and formats.

Since Microsoft BASIC cannot open resource forks directly, you need to make them accessible in some other way. The best solution would be the implementation of the `Open_Resource_File` as an alternative hook to the Microsoft BASIC `OPEN` command. Next best would be an assembler routine embedded in a library for run time access. The simplest however is to copy the file you wish to look at and use Fedit to swap the resource and data forks over. This allows the standard file access method to be used.

With regard to Apple breaking the rules on resource structure, the concept of resource types is that the structure of the resource data is implicit in the type code. That is `STR` indicates that the resource is a run length encoded Pascal string whilst `CODE` is a 68000 machine code segment. The System File contains `PREC`, `STR`, `INTL` and `INIT` resources which do not conform to a standard structure. The id is used to indicate which one of several possible formats might apply. `PREC` is used by the printer driver anyway, `INTL` should not be used for user resource types and `INIT` is used only at startup. The `STR` example is also printer related but since `STR` resources are widely used this instance is a little more embarrassing. The id of the offending `STR` indicates that the string is owned by the printer driver and it is unlikely that you will create any resources with such an id unless you are writing your own printer driver.

Resource Id values have special significance within the context of some resource types. For instance `FONT` resource ids indicate the point size of the font reference within the menu structure. `ICON` resource ids also have special significance to the effect that id values between 256 and 511 (inclusive) are reserved for use within menus. In general, apart from those cases indicated above and one or two other exceptions, resource ids in the range 49152 to 65535 (-1 to -16384) indicate that the resource is owned by another resource. The owning resource types are limited to 8 specific types which in general cannot themselves be owned. Whilst icons can be owned in this way, `FONT` resources cannot.

Inside Macintosh (in the two binder form) is now quite out of date. My copy is about a year old and I know that there was a version prior to that. Since my copy was printed there has been the 'phone book' edition, the Addison Wesley edition and also the Steve Chermicoff book. The problem areas in particular that need revision constantly are in connection with the allocation of `FONT` id numbers and resource types. Apple are attempting to rectify this by publishing technical notes for public domain circulation but I have only been able to obtain a couple of these so far. The Inside Macintosh manual acknowledges that it does not cover certain areas by indicating that these will be included at a later draft. There must be at least twenty such references although I have not counted them.

Since the book is of some age it obviously does not document the Macintosh Plus changes nor the new ROM calls that must now be available. Perhaps there will be another supplement. For the time being however I do not think it is reasonable to have to fork out another 70 pounds for a later copy of a book I already have. The phone book edition has never to my knowledge been available in the UK through official sources.

You will soon realise when reading in depth Macintosh literature that the Macintosh has been designed primarily with the Pascal programmer in mind even though the assembler interface is very good it is documented as an alternative to the Pascal interface. There will probably soon be assembler based books on the Macintosh but if not I would enjoy having a go at writing one sometime. (There are one or two really good ones out already, - don't let that stop you. Mac Ed.)

Since resource types are being created all the time, it is very difficult to come up with a complete and reliably documented list of types and formats. To some extent this is the responsibility of the application designers and their documentation policy. Since I have found around 70 resource types that Apple have documented in one way or another, there must be at least another 25 in fairly wide circulation. If anybody has any examples or documentation, I would be interested to hear from them so that the new types can be incorporated into Res Ripper

How to extract what you need from a resource file

To gain an appreciation of the contents of a resource fork, it is worthwhile spending some time analysing the file with `R Edit`, `Res Edit` or `R Mover`. When I analysed the System File for the first time, I wrote down all the information I could gather with these utilities. I ended up with a list of resources which detailed the following:-

- Resource type code (four letter format descriptor)
- Resource id (value)
- Optional resource name (Pascal string)
- Resource size (value)
- Resource loaded into system or application heap (flag)
- Resource purgable or permanent (flag)
- Resource locked (flag)
- Resource loaded when application is launched or when the application requires the resource (flag)
- Resource protected or not (flag)
- Resource description (deduced by inspection)

Having got an idea of the structure I could then inspect the internal contents of some of the less familiar resource types which are not disassembled by the Resource tools. For instance, `INIT`, `PACK` and `FRSV` are not disassembled. To do this I knew I would need to write a program of sorts.

Armed with the above list, I dived into the contents of the Inside Macintosh book again. The resource manager chapter describes in detail the construction of the resource fork of a file that contains resources. At the front is a group of pointers to the rest of the file, followed by the resource data (without any type info) and on the end a map of the resources. I have summarised the resource map format below for those of you who are interested.

The lengths of each section are indicated by the value between square brackets. If a named value has been used then the value has been extracted earlier on in the processing of the resource fork. The 4 byte values are long integers which need to be converted to decimal within your reading program. The 2 byte values are short integers which may be signed or unsigned depending on their context of use. The value of Posit starts at zero and is incremented as each character is read from the disk.

The indicated variable names are related to the way that Res Ripper extracts the information from the resource fork. The FOR...NEXT loop constructs are used below to indicate fixed length repeated values whilst the WHILE...WEND loops indicate variable length repeated values. The numbers in the extreme left hand column indicate the relative position from the start of the data being described.

Resource file format

Resource file header

0	[4]	Offset to resource data (Resdata)
4	[4]	Offset to resource map (Resmap)
8	[4]	Length to resource data (Resdatalen)
12	[4]	Length to resource map (Resmaplen)
16	[112]	Locally held directory data (Dirdat\$)
128	[128]	Locally held application data (Applicdat\$)

Resource data objects (count Total whilst processing)

Resdata	WHILE Posit <> Resmap
	[4] Length of following resource data (Reslen)
	[Reslen] Resource item data (Resdat\$)
	WEND

Resource map

Resmap	[Resmaplen] Resource map data (Resmap\$)
--------	--

The format of the resource map is discussed separately as the resource map is loaded in one piece and resides in memory permanently after some minor modifications by the resource manager. The items modified by the resource manager have an underscore in front of their names.

Resource map format (stored in Resmap\$)

Resource file header (copy)

0	[4]	Offset to resource data (_Resdatastart)
4	[4]	Offset to resource map (_Resmapstart)
8	[4]	Length to resource data (_Resdatalen)
12	[4]	Length to resource map (_Resmaplen)
16	[4]	Handle to next resource map (_Nextmap)
20	[2]	File reference number (_FileRef)
22	[2]	Resource file attributes (FileAtrb)
24	[2]	Offset within res map to type list (Typelist)
26	[2]	Offset within res map to name list (Namelist)

Resource map data

Typelist	[2]	Number of resource types in map (Types)
	[Types*8]	Type list data (Typedat\$)
	[Total*12]	Resource pointers data (Respointers\$)
Namelist	[LEN(Resmap\$)-Namelist]	Names stored here

referenced from Respointer\$ (Namelist\$)

Typelist format

FOR X = 1 TO Types

0	[4]	Resource type code
4	[2]	Qty of this type of resource (-1)
6	[2]	First entry in Respointer\$ of this type

NEXT X

Resource pointer format

FOR X = 1 TO Total

0	[2]	Resource id
2	[2]	Offset into Namelist\$ where name is stored (no name = -1)
4	[1]	Resource attributes
5	[3]	Offset from Resdatastart to resource item data
8	[4]	Reserved for use when loaded into memory

NEXT X

Namelist format

WHILE Posit <> LEN(Namelist\$)

[1]	Length of following string (Len)
[Len]	String data

WEND

Having processed the resource fork thus far, we should have available to the program, the following variables:-

- Resdata** Address of first byte of resource data within the resource fork. Open the file and read this many characters to position the pointer correctly at the start of the resource table.
- Dirdat\$** Directory data stored locally. This appears to be unused in the System File.
- Applicdat\$** Application data stored locally. Likewise, this appears to be an unused feature within the System File.
- FileAtrb** File attributes (16 bits).
- Typedat\$** List of resource types with pointers into the Respointers\$ list for access to the resource items.
- Respointers\$** Complete list of resource items with pointers to the data and the optional resource name.
- Namelist\$** List of run length encoded (Pascal string) resource names.

The following data can be derived from these items some may already be available from the process itself:-

- mapReadOnly** AND masked with 128 from resource file attributes value. Disallows any writing of resource data back to the map until the map is unlocked.
- mapCompact** Only set in memory, AND masked with 64. Items have been removed from the map and it needs to be compacted.
- mapChanged** Only set in memory, AND masked with 32. The contents of the resource map have been changed and need updating.
- Totaltypes** LEN(Typedat\$)/8
- Totalress** LEN(Respointers\$)/12

From a language like Microsoft BASIC, the most convenient way to manipulate these values is in the form of arrays. The arrays need to be built from the strings and it allows the access method to be more logical if the types (and their type lists) are sorted first. Then Sort the items within each type into physical order. That is, in accordance with the order in which they are

placed in the resource data area.

How Res Ripper Works

Having now extracted the information about where the data is stored, we can now proceed to analyse it. This is really what Res Ripper is all about. The first pass of Res Ripper operates on a swapped forks file created by Fedit. It extracts the resource map and formats it into several arrays. These arrays essentially are based on the Typelist and Respointers strings extracted directly from the resource map. Stepping through the Type\$(X) array gives us a list of the 4 character type codes currently available. Typeqty(x) contains a list of the number of resources of each type. Typeptr(X) points into the Respointer arrays to indicate the first resource pointer for the Type\$(X) type. There are Typeqty(X) entries in the respointer array collected together and associated with the current type.

The Resid(Y) array contains a list of resource ids. Resnam\$(Y) contains any resource names associated with the resource entry but has a 'no name' flag if the resource is unnamed. The resource attribs are stored in the array Resattr(Y) and finally the pointer into the resource data is stored in the Resdat(Y) array. When the arrays are complete, Pass1 presents some of the data just extracted to the operator.

The arrays, together with the start address of the resdata, the filename, the total number of resources and the total number of types is written to the Clipboard at the end of Pass1. Using the Clipboard in this way is better than COMMONing the values since arrays do not COMMON reliably in Microsoft BASIC. In addition, so long as the Clipboard remains intact, subsequent passes can be run as often as required and in any order. When Pass2 is run, Res Ripper presents a list of all the resources in the system.

Pass3 presents a menu of all the current types being worked on and allows you to select a type for detailed analysis. At this point, the program starts to use the overlay code segments associated with each resource type. The particular resource overlay is named with the type being included in the name, the process is then automatic. Specific format differences such as those evident for the INTL and INIT types are handled by further appending the current resource id to the requested filename. A simple error handler then removes these and uses the default method for each type when a general format is required. If no resource handler exists for the specified type, then a default Hex/ASCII/Decimal dump is performed instead.

The BNDL resource is inspected if there is one to detect whether there is any version data stored for the application. This then will support the version data which is stored in a specially coded resource. The version data resource type code is the same as the creator code in the filetype info stored in the disk directory. Obviously this resource type code will be different for every application but hopefully can be ascertained if there is a BNDL resource. As the resource overlays are loaded, the requested module name is checked against this version data identifier and if necessary the version data disassembler is used instead. This could get tricky if the creator code is the same as an already defined resource type.

Pass4 is exactly the same as Pass3 except that the entire resource map is disassembled and presented to the operator without without any need for intervention. Some pausing facilities are built in such that a mouse button closure causes Res Ripper to pause at the next resource end. For long

resources, holding the mouse button down in a blank part of the menu bar pauses the display momentarily. To enable some limited degree of disassembly on the data fork, a companion program is also supplied. This is called (for want of a better name) Data Ripper. This program simply opens the data fork on the original (un swapped) file and does the Hex/ASCII/Decimal dump on it.

The available memory in a 128K Macintosh forces some compromises so it is just not possible to fit a true 68000 disassembler in as well. This is however being looked at for the final distributable version of Res Ripper. At present, the alpha test version of Res Ripper is being evaluated and has only been exhaustively tested on System Files images. For the next project, we perhaps will have a look at the Finder. 🍏

(Cliff will be continuing this in the next issue. Also see new Disk 137 Res Ripper.)

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March 3rd:

Print Programs

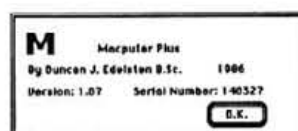
eg. Printshop, Newsroom and PageMaker.

for info 0582-5739118

MACPUTER 512 Plus

by Ivan Knezovich

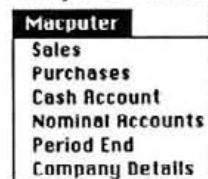
MacPuter Plus is advertised as a complete integrated accounting package for the Macintosh computer. The company, Lorne Computer Services Ltd, has a proven history of similar accounting packages on earlier Apple machines.



Macputer contains the following:
 Purchase Ledger • Sales Ledger •
 Cash Account • Nominal Ledger •
 Management Reports • Invoicing •
 Cash Flow Report and Tax Return.

Setting up the system is relatively straight forward but advice from your accountant is recommended to ensure you set off in the right direction. Before you begin posting or entering transactions you are required to enter information into the foundations of the system. These areas are Company Details, VAT, Nominal Ledger, Sales Ledger and Purchase Ledger. Of these the Nominal Ledger is the most important section, it is the centre of the system and as such it must be designed and set up very carefully before you start to enter transactions. The Nominal Ledger supports up to 350 account types which are split into four categories: Sales (1-50), Purchases (51-100), Expenses & Overheads (101-200) and Balance Sheet (201-350). Once you have set up the account types you require for your business they will be allocated a code for future posting. Customer and Suppliers details are then added with account codes. From here on it is into the main business of the program

Macputer Menu - This menu is divided into *Sales, Purchases, Cash Account, Nominal Accounts,*



Period End and *Company Details*. Most of your time will be spent in the first three sections of the menu. Selecting one of the first four will result in an addition menu displayed to the right of the Macputer menu. If selected further options are then highlighted.

Sales Ledger - The sales system controls all aspects of customer and management accounts, customer information and sales analyses. The system keeps details of all sales transactions until such time as they have been completed i.e. paid off in full. After a period end, when the Sales Transaction Journal has been printed, they are erased. Like many other systems once an invoice has been printed and posted it cannot be viewed or printed again at a later stage. However, the invoice number, date and totals can be viewed with the customers ledger.

Preparing invoices and credit notes is simple and much is automatic. Layout of columns are pre-defined as *Description, Quantity, Price, Per, Discount, Nom. Acc. number* and VAT with totals of *Nett, VAT and Total*. The *Help* menu provides a

Transactions
Prepare Invoices
Prepare Credit Notes
Sales Invoices
Sales Credit Notes
Direct Credits
Sales Refunds
Balance Adjustments
Payments Received
Cancelled Payments

Customers
Existing Customers
New Customers
Delete Customers
Print Names & Addresses
Print Mailing Labels
Reports
Customers Ledgers
Aged Debtors
Statements
Transaction Journal

reference for the different account and customer codes, should you forget. Once the details are complete and have been checked you then

print the invoice. If you are satisfied with the printing the invoice is posted to the system. The other options in the Transactions menu are standard to most accounting systems. If errors are made and entered into the sales ledger or bad debts need to be written off, they can be adjusted with the *Balance Adjustments* command.

Reports and listings produced by the sales ledger may be either sent to the screen or the printer. They are printed in alphabetical order according to their account codes and you are able to select the range to be listed. The reports include *Customer Ledgers, Aged Debtors, Customer Statements* and a *Transaction Journal*.

Purchase Ledger - This section is similar in operation to the Sales Ledger. The commands available under the purchase Transactions menu are: *Purchase Invoices, Purchase Credit Notes, Direct Debits, Purchase Refunds, Balance Adjustments, Pay Suppliers* and *Cancelled Payments*. The Reports menu contains *Suppliers Ledgers, Aged Creditors* and *Transaction Journal*.

Cash Account - Cash transactions that do not warrant the opening of a Customer or Supplier Account are recorded here. Petty cash receipts, payments and retail sales would also be recorded here. Commands available are *Cash Sales, Cash Purchases, Cash to Bank, Cash from Bank* and *Print Daybook*.

Nominal Accounts - The Nominal Ledger provides an analysis of all transactions posted into the program through all parts of the system.

Nominal Accounts	Account Details	Reports
Account Details	Existing Accounts	Trial Balance
Journal Entries	New Accounts	Profit & Loss
Reports	Delete Accounts	Balance Sheet
VAT	Account Layout	Financial Position
	Set Budgets	Management Accounts
		Nominal Ledger
		Transaction Journal

Management of the Nominal Account is handled from the *Existing Accounts, New Accounts* and *Delete Accounts* commands from the *Account Details* menu above.

A comprehensive list of the Nominal Account headings in the system can be obtained with the *Accounts Layout* command and they can be sent to the screen or printer. With the *Set Budgets* command budgets or target levels of income and expenditure can be recorded in the system and used for future comparison against actual performance. The *Journal Entries* command is used to move sums from one Nominal account to another.

The *Reports* menu offers the following commands: *Trial Balance*, *Profit and Loss*, *Balance Sheet*, *Financial Position*, *Management Accounts*, *Nominal Ledger* and *Transaction Journal*. The *Financial Position* command displays a box on the screen that indicates the financial status of the company with cash flow statistics that summarises current liquidity. The other commands send reports to the screen or printer.

VAT - Vat is automatically managed by the system and it can be used to produce the required returns and record

VAT
VAT Rates
VAT Return
Pay VAT
Receive VAT Refund

payments made or receipts from the Customs & Excise. The VAT menu offers the following commands: VAT Rates, VAT Return, Pay VAT and Receive VAT Refund.

Period End Processing - The period end routines clean out the system of accumulated transactions which take up disc storage space and slows down the system. The system can store a maximum of 5,400 transactions between period runs, so it is advisable to perform the routine at regular intervals, preferably at the end of each month. The *Year End* command is performed at the end of the financial year and it cleans out the entire system.

Printing - Invoices can be printed on plain paper, standard pre-printed forms or special forms with your own letterhead. Address labels can be printed as well but only 'single width'.

Summary - The Macputer 512 Plus Accounting system is an easy to use well organized system. What you see is what you get, no more and no less. It does not have all the bells and whistles of Apple Accounting but at half the price it is more than sufficient for most medium sized business accounts. Like all software look carefully at your requirements and choose the package that best suits your needs. The restrictions of this package are in the customer accounts and transactions file sizes.

File Sizes		
File Name	Maximum	In Use
Customers/Suppliers	800	
Transactions	5400	

A maximum of 800 combined Customer and

Suppliers accounts and a maximum of 5,400 transactions (between period ends) is allowed. If your requirements are greater than these then you might run into problems. Data export from the program for spreadsheets and charts would be a useful feature and password protection is sorely missed. Another improvement could be made with printing invoices. Each individual invoice has to be printed before starting the next, there is no option for printing invoices together.

Manual - The manual is well written and clearly illustrated and like the program itself the most prominent feature is its ease of use.

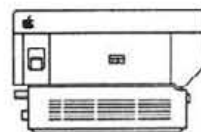
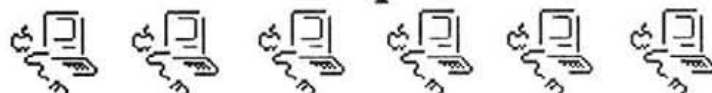
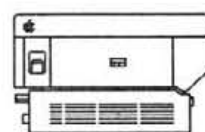
Requirements - Minimum of Macintosh 512K and two disc drives. The program is not copy protected and runs quickly on a hard disc. Invoice Paper is available direct from Lorne Computer Services Ltd.

Price - £395

Availability - From your local Apple dealer or direct from:
 Lorne Computer Services Ltd
 Oban, Argyll, Scotland.
 Tel: 0631 65635 Telex 778548

MacExpo - Rotterdam

24th April 1987



Join our luxury coach / boat trip to this new event.
 Many new Macintosh Products will be launched at this Show.

Leaving early evening on the 23rd April from London we will travel by overnight ferry to Holland and then on to the Show arriving in time for a full days viewing. We will return on the overnight ferry arriving back in London mid-morning on the 25th.

If you would like to join us please write to the P.O.Box or leave a message on BT GOLD SYS 84: BSG006 now. Prices will depend on numbers travelling.

If you own an Apple™ Macintosh™ we can think of 100 good reasons why you'd be crazy to miss MICE 87 - The Macintosh Independent Conference & Exhibition

Reasons 1 - 53

There will be 53 companies exhibiting products for the Macintosh. Those from the UK include Blyth Software, British Telecom, CCA Micro Research, Computers Unlimited, Heyden & Son, Linotype, MacEurope, MacSerious Software, Maxima and Symbiotic.

Reasons 54 - 64

You will be able to see 10 products new to the UK market - new systems, new add-ons, new communications products, new graphics software and what can be best described as the second generation of desktop publishing software.

Reasons 65 - 89

Alongside the show there are 24 hours of seminar sessions organised in conjunction with MacUser Magazine. Subjects range from Desktop Publishing to communications. Space is limited - so call now for details.

Reasons 90 - 92

The exhibition is open for three days - Thursday 14th, Friday 15th & Saturday 16th May.

Reason 93

One of these days - Friday 15th - the show stays open until 7:30 in the evening so that you can see the show at your own pace after a hard day's work.

Reason 94

The final day of the show is a Saturday - so you can make a day of it or come back if there is too much to take in at once the first time.

Reasons 95 - 99

The venue - the Royal Horticultural New Hall - is only 5 minutes from Victoria Station in Greycoat Street. If you're not sure where Greycoat Street is, we'll even send you a map together with further details of the show if you register before 7th May.

Reason 100

We're crazy enough to let you in free to the exhibition.

If you'd like to register for the show now, just return the coupon below (photocopy the ad before completing the coupon if a friend or colleague should wish to come as well). We'll send you your Unique Registration Number together with more details of the Exhibition and Conference. If you'd like reminding about the show, include your telephone, fax or telex number and we'll jog your memory just before the show. If you prefer, you can register at the venue on any of the days of the show but don't forget the dates.

MICE 87 - The Macintosh Independent Conference & Exhibition is an independent event managed and owned by Quantum Research Limited. It is neither affiliated with nor sponsored by Apple Computer Inc. Apple and Macintosh are trademarks of Apple Computer Inc.

I'm not crazy - I want to catch MICE.

The dates for the show are in my diary but please remind me all the same ☐

Name

Address

Phone Telex Fax

Please return to :-

Quantum Research Limited

Axe & Bottle Court, 70 Newcomen Street, London SE1 1YT

or call us on 01-403 1473.

Mice 87 is fully supported by Apple2000

Members are offered special discount rates and priority places for the Conference Sessions.

From Delphi

From: MACINTOUCH (15014)

Subject: **ReadySetGo 3**

Some initial notes on Ready, Set, Go! 3:

- It's great - It uses only Laser Prep and LaserWriter, no funny PostScript files - It doesn't support tabloid size pages - It seems pretty quick (I haven't done a large document yet) - It has PostScript blocks: just type PostScript in and it'll be interpreted in that space on the page during output - FORMATTED Word and Write files can be imported, but graphics embedded in Word files come across as trash characters, not as a picture as PageMaker 1.2 does (I didn't try MacWrite for this) - no copy perversion - list \$295, \$169 in Icon Review catalog - menus don't have ellipses where they should - the spell checker can't compete with Spellswell, but a user dictionary can be defined where words are stored in ASCII text format

Ric

From: BILLIAM

Subject: **RSG 3**

I've been using RSG 3.0 for about 2 weeks now and, contrary to what I've been reading, I'm DISAPPOINTED. It has all the features one wants but the attention to details seems lacking. Some problems include:

1> There is no UNDO (except on text editing). If you move a block by mistake (and it's EASY to do, as I'll mention next) you have to manually move it back. If you resize a block wrong you have to get it back yourself.

2> A border is not really transparent. This is the most annoying. Trying to choose a text block that sits "inside" a border block doesn't always work. If the border block is on top you have to send it to the back by choosing SEND BEHIND and then choosing the text block (NOW on top). If you touch the back (border) block by mistake you have to start over. In Pagemaker, in order to select a border you have to actually touch the border, the inside of the border doesn't exist to the cursor.

3> Clicking the Zoom box to full screen keeps you from choosing another icon from the tool palette. You can move the tool palette (Hold down Shift while

dragging the top of the palette) but it can't sit on top of the document. As soon as you touch anywhere on the document the palette vanishes behind. You can only get it back by manually shrinking the document window. In Pagemaker you can hit CMD W to bring the tool selection window into view.

4> The rulers are simply from the edge of the paper and cannot be made to start at the printable margins. Having to remember to subtract 1/2 inch from your measurements is a pain.

5> BUGS!! In 2 weeks I have already found 2 bugs. The worst is when changing a whole block of text that contains some boldfaced words from Geneva to Helvetica it will LOSE all but

2.0 or 2.1 Doc's to 3.0, does something to the Bundle bit setting of RSG 3.0? It does away with it and RSG 3.0 takes on a generic icon, as do the doc's. Darned if I can reset it, in spite of ResEdit and Fedits use. Replacing RSG 3.0 is the only way I've found to correct the bundle bit problem. Also, I've noticed random occurrences of "garbage characters" filling up the text entry block on "Save As..." choices. Shades of the old 1st.BASE program, when HFS came along. As you said, I like RSG also, but I find it hard to believe their shipping 3.0 with these short comings and bugs . . . some body had to see these.

Rod

From: LAMG Subject: **RSG 3 Opinion**

I have to agree... I've been using RSG 3.0 for a week, too, and I'm both impressed and disappointed. To add to the list of bugs: the view 200% option has a

bug in it that causes lines to slant upwards to the right.

Perhaps the most annoying feature of the program I've found is the way in which tabs are handled. For each tab set, you have to set an indent (the actual position of the tab from the left edge of the block) and a measure of the width of the tab column. This second value can be a real pain to figure out. (I gather it's there to allow you to control when tabbed text moves to the next line, but it makes dealing with tabs very difficult). I also wish that they'd come out with a real manual for the program instead of the magazine they sent. It doesn't go into enough detail about how certain features (tabs, for instance) work. On the whole, though, RSG 3.0 is a major improvement over 2.1... it just needs some attention to detail to make it truly first rate. I hope that Manhattan Graphics realize this and release an update very soon, and send it free of charge to all registered users (along with a real manual!).

Franklin Tessler

From: TRAINBRAIN (14947)

Subject: **Programmers at Work**

While killing some time in a Computerland recently, I spotted a title "Programmers at Work" on the bookshelf. The title was enough for a

NETWORK NEWS

the first letter of everything boldfaced. And because there is no UNDO you have to retype those lost words.

Don't get me wrong. There are many great things about the new version. The best is being able to drop a picture (or graph or text block) onto an existing text block and the words will automatically wrap around the block. Resize the picture and the text rewraps. Another nice feature is being able to choose any pattern to act as the border pattern. But the small things like not being able to get to the tool palette with a CMD key is CONSTANTLY getting in the way of using these features easily. I like RSG 3, I just wish Manhattan Graphics would fix the details that, to me at least, seem so obviously ill thought out to anyone who actually uses the product for more than a week.

Billiam Coronel

From: RODPAINE

Subject: **RE: RSG 3 Opinion**

Have you noticed that converting RSG

mental yuk, but since the car was not going to be ready for an hour, I ended up thumbing through it. Turned out to be one of the most delightful books I have ever read. It's a series of interviews of the well known programmers of our day (Gates, Kildall, Hertzfeld and 16 others). They express feelings, philosophies on a variety of subjects, programming techniques, where computers are going, the effect of age on programming skills (scary, I'm 46), how they got started, etc.

The techniques and hints are useful, but the book is so much more than that. I identified with many of the feelings, dreams, frustrations, and triumphs expressed. It gave me a better appreciation of what it is to be a programmer. I can now put into words why I enjoy it so much. It gives the profession some dignity. Next time I fill out a form with a box marked 'occupation' I will say 'programmer' without the mental prefix 'just a'. It's published by Microsoft Press (\$14.95). The editor is Susan Lammers. I have also seen it in Crown Books. The other big chains should be carrying it also.

Steve Seidensticker

P.S. I have no connection with Microsoft or anyone mentioned. This is strictly an unsolicited testimonial.

From: PEABO (14960)

Subject: **Programmers at Work**
(Re: Msg 14947) I'll second the testimonial. It's a great book and I stretched it out over a week or two instead of gulping it down at one sitting.

Peter

From Info-Mac

From: CML5A9%IRISHMVS.

BITNET@WISCVM.WISC.EDU

Subject: **PICT Resources**

Since there have been several questions of this nature lately on infomac, so I thought I would outline a more GENERAL procedure for getting PICT resources from other types of data. This hold true for just about any program that generates PICT type data in the first place.

1) Bring up the document in your favourite program. (MacDraw, for instance) 2) Select all of the document you want to make into a PICT. (In MacDraw, I usually reduce to fit, and highlight the whole thing) 3) Select COPY from EDIT. 4) Open the Scrapbook. 5) PASTE.

Now, the scrapbook contains a PICT resource with your PICT in it. So, quit

the application, go into ResEdit, open the Scrapbook file, open the Pict resources, find the one with your picture in it. Select Copy from Edit menu. Close the Scrapbook file. Open your application where you want to paste the PICT. Select PASTE from EDIT.

And voila. You have a PICT resource from a document into your application. By the way, this is a GREAT way to do help screens, especially for small utility programs.

I should point out that the resource you copy from the scrapbook will have a strange resource number. Just do a GET INFO in ResEdit on the resource after you paste it into your application and change the number to whatever you want it to be. Hope this helps.

Tom Dowdy.

From: CML5A9%IRISHMVS.

BITNET@WISCVM.WISC.EDU

Subject: Re: **800K drive troubles**

The problems that someone was experiencing with 800K drives creating bad 400K disks could stem from the method used to duplicate the disks. If each disk is EXPLICITLY formatted from the finder, you are okay, but if you (like myself) use the 512K Disk Copy utility to make multiple copies, the disks will NOT work if you let the utility copy them. I think this might be because the default initialization routines on the 800K drives are for double sided disks. This is just a guess however. The lesson is: format the disks first, then do a 400K disk copy.

Tom Dowdy

From: 415-854-3300 x2538

DAVEG at SLACVM

Subject: **Terminal Emulation**

Regarding programs which emulate a VT100 and graphics terminals, I know of a couple. They are VersaTerm, one called Griffen Term (or something like that) from Reed College and I believe that Mesa Graphics now has one which does both VT100 and graphics. The only one I have had direct experience with is VersaTerm and it is a great program. The list price is \$99 I think and it is well worth the price.

VersaTerm emulates a VT100 and a Tektronics 4014 and can switch between them under user or host control. I regularly use a package on the mainframe which switches VersaTerm from the VersaTerm mode into Tektronics mode and does the graphics. The features of this program are quite extensive and the author Lonnie Abelbeck adds features regularly.

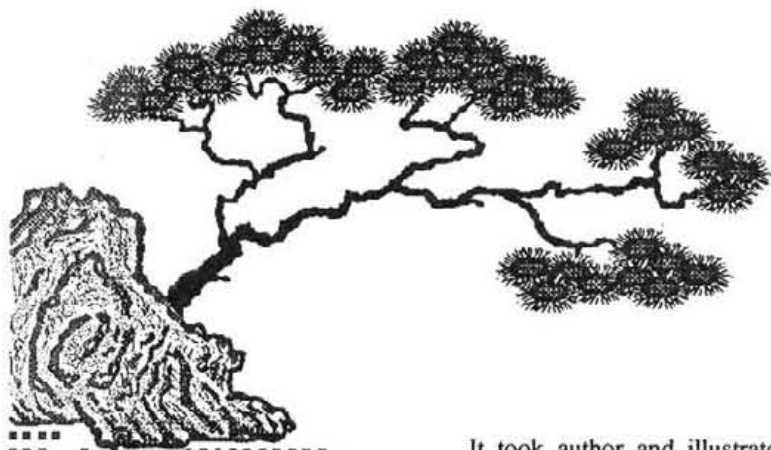
The current release 2.2 supports the MacPlus keyboard including cursor keys, has file transfer using MacTerminal XMODEM, MACBINARY, and Text XMODEM. The Imagewriter and Laserwriter are supported as well as a Diablo 630 and a generic printer. For the user who has more graphics intensive needs there are two other ways which VersaTerm can help... a second program by the same author allows graphics recorded by VersaTerm to be viewed in a number of different ways. VersaTerm can record the Tektronics output in a vector graphics format and then with a program Texprint (around \$80 I think) you can zoom the resulting plots for a better view of any part of them. Texprint also supports the Laserwriter so that now your plots can be printed using the full resolution of the Laserwriter. They can also be saved as MacDraw documents and manipulated with MacDraw. This is an excellent way to transmit mainframe graphics to the Mac for inclusion in a Macintosh document.

There is an even more powerful program called VersaTerm Pro which evidently merges the capabilities of VersaTerm and Texprint into one program with even more features. That is a bit pricey however and is in the range of \$250. My experience dealing with the distributor Peripherals Computers and Supplies Inc. (215-779-0522) and the author Lonnie Abelbeck have been great. Updates to the program are always \$10 so it is easy to upgrade to a more capable version. In almost all cases the updates have been to add features and the program has been quite bug free for me. I hate to sound like an ad for these guys but I really think they put out an excellent product which is overlooked by reviewers. It is an excellent terminal emulator as a VT100 (much more usable than MacTerminal) and really excels when you need to do graphics. I do not have any connection with PCS or Lonnie other than as a satisfied customer. David G.

Credits

Info-Mac digests consist of submissions by individuals on the academic computer networks. Submission and distribution of these digests is by network, moderated by volunteers at Stanford University.

Delphi is a commercial time-sharing and bulletin board system. The Delphi Digests are made available thanks to Jeffrey Shulman of Rutgers University. 🍎



ZEN

and the Art of the Macintosh

reviewed by Irene Flaxman

It took author and illustrator Michael Green over a year to create this book, which Apple have described as the first computer coffee-table book.

It is intriguing - a mixture of text and graphics created totally with the Apple Desktop Publishing System. Some of the graphics are from clip-art libraries (notably MacMemories), some have been captured by means of a video digitiser, but most have been created by Michael Green using MacPaint.

The man is obviously a talented and imaginative artist, and in the final chapter he reveals some of the techniques he has used to good effect - so we can all benefit from the knowledge he gained during his year of effort.

To whom will this book appeal? A difficult question to answer, perhaps. It appealed to me, because I was intrigued by the title (what has Zen to do with a computer?), I was captivated when I 'flicked through' and saw the illustrations, and I could sympathise with Michael and his family when I read the description of how much time could be lost whilst playing with the Mac! It appealed to my husband because of the liberal use of illustrations (he doesn't like text to be too heavy). It will appeal to the MacPainter for the tips on how to get the best from the Mac. It will appeal to the non-computer-literate (even the strongest phobia should melt with this book).

The book describes Michael's experiences with his Macintosh from his first picture (an incredible wizard) through his stages of development as he learns, saves, alters, reverts - as we all do! He is not afraid to admit how easy it is to get carried away and overdo the special effects, when simplicity is often more effective.

He dips into left- and right-brain theory and the references to Zen are intriguing (and lead to some interesting graphical ideas).

In their American press release, the publishers (Running Press) describe the book as 'a modern parable, a bit-mapped Pilgrim's Progress worthy of serious reflection by anyone dealing with the fascinations and obsessions of our technological age'.

It does give cause for serious reflection, but is also amusing, entertaining, and beautifully illustrated.

I find it hard to describe and review this work, feeling that I cannot do it justice, as it has so many different (and fascinating) facets. It defies description. It is a book to be experienced rather than simply read. I truly am intrigued and fascinated, and I am left wishing that I were blessed with such talent.

I am sure that Michael's work will appeal to many. I must admit that, having started to read the book, I did not want to put it down!

Heard
the
whispering
of
pine
trees

Heard
the
lapping
of
the
water

Sounds of music

words of wonder

Illustrated by Norah Arnold in the style of Zen
and the Art of the Macintosh.



DataFrame Endorsement

by Todd Congdon

When I was at Mac Expo in Boston they laughed. I was telling them how I use my 128K machine with external drive and Imagewriter to assemble an issue of EarthBeat. They said the Mac Plus with a SCSI connected hard disk is another world. So, with plenty of Mac Pluses around to borrow, we went out and got a DataFrame 20. This is a 20 Mb (after formatting) half height Winchester disk from SuperMac Technology, 950 N. Rengstorff Ave., Mountain View, CA 94043.

Hooking it up is as simple as plugging in the 3 1/4" external drive, except this drive has a power cord of its own. It doesn't matter how you turn it on; Mac first or DataFrame first. The drive's motor makes a quiet hum. It's pretty loud compared to the Mac's near-total silence. But if I were doing the same work I'd be grunting, so I think the sound is fine. Soon the old external drive is forgotten.

One of the best things about this new Mac world is the absence of "system anarchy". When I stored everything on 400K floppies, I tended to have many systems tailored to the needs of the info on each disk. Sometimes, I'd choose the wrong system setups for the disks, and sometimes I wouldn't find out 'til some critical moment, like when I'm ready to print. Since the Mac Plus sees the DataFrame 20 as one big (HFS) disk, it makes sense that there should only be one system folder in the DataFrame. You wouldn't put two system folders on one floppy. Right?

With 20 Mb to play with, I loaded the system with all the DA's and fonts I ever seem to need. In doing so, I've been able to clear my head of all those specialized system folders. That alone would make the DataFrame worth its keep. The speed is always an extra dividend. To a 128Ker, it very rarely seems to slow down the thought process. However, there is an interesting note in the DataFrame's documentation concerning speed. With the arrival of very fast peripherals such as the DataFrame, it's become evident that the rate-limiting factor is often the CPU. Applications with low processor overhead will run extremely fast while those with significant overhead won't run as fast as the DataFrame could enable them to. The ball's been thrown back into the programmer's court.

The DataFrame 20 is just one of many SCSI connected hard disks available for the Mac Plus. I recommend it because it does exactly what it's supposed to do, like my old external drive, like my old 128K Mac, without missing a beat. I hope the other hard disks are performing as well. 🍎

(Todd Congdon is the originator of the Earthbeat disk-based magazine.)

New Products for the Macintosh

Trapeze™

Trapeze is a spreadsheet that does not store information in rows and columns and was designed specifically for the Macintosh. It stores information in blocks that can be freely moved anywhere on the screen. It will keep track of the relationship between the blocks. Auto-sizing allows the blocks to adjust in size.

An MC68881 maths coprocessor is directly supported. As many as 32 worksheets can be open at one time and can be consolidated into one report.

Trapeze has over 100 built-in functions, charting features, and a model

size limited only by the amount of memory available. In addition to the standard business functions, advanced operations such as matrix operators and simultaneous equations are included. It supports using any font, style or size of print, or even colour, in any block.

Graphs can be created on the same page as the spreadsheet or they may be imported from MacDraw or MacPaint along with text from a word processing application. More information on Trapeze may be obtained from: Data Tailor, Inc. 1300 S University Drive, Suite 409, Fort Worth, Texas; (817) 332-8944.

Thunder!™

Thunder! is a desk accessory spelling checker that works from within any application that supports desk accessories. It offers interactive or bulk selection checking modes. The bulk selection checking works through the clipboard. Thunder! has a 50,000 word dictionary and supports user defined alternate dictionaries. It also has a glossary capability called Learned Words. This allows abbreviations to be established which reduce the amount of typing. Thunder! replaces the abbreviations with up to 255 characters of text. This program requires 512K or more, supports HFS, is not copy protected and costs \$49.95. It is from Batteries Included, 30 Mural Street, Richmond Hill, Ontario, Canada.; (416) 881-9941.

GreyFonts™

LaserWriter owners can now print their LaserWriter fonts in nine new shades. The GreyFonts™ package contains new fonts which download to your LaserWriter automatically giving you standard LaserWriter fonts in nine different shades of grey ready for you to install and use immediately. These fonts are completely compatible with all programs which allow standard LaserWriter fonts, including MacDraw, MacWrite, Microsoft Word, PageMaker and SuperPaint. All of the fonts have the usual styling options, bold, italic, underline, outline and shadow.

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Backing Up Your Hard Disk

by Kevin Thompson

Using HFS Backup 1.1 from PCPC

The dangers inherent in placing your faith in one 20 megabit device (all your fragile eggs in one merrily spinning basket) are clearly perceptible to the greenest novice in computing. Who hasn't used the only copy of a program/latest essay/this year's accounts as a table mat, or some equally stupid variation at least once in their life? Then it becomes too late to worry about data security. To avoid this I always keep programs and data in at least three different places. The current media it 'lives on', at least one backup, and, particularly with programs, the locked media on which it arrived. Variations of this theme are possible with the hard disk.

So, you have built a hard disk, with your favourite applications spread across the desktop. Multi-folders (in recommended Apple style) below that. You could maintain your copies merely by copying particular folders across to a heap of individual disks kept solely for that purpose, but, with the best will in the world you'll eventually lose track - and eventually the crucial folder doesn't get copied on the day your hard disk becomes raw material for a frisby. Sure it shouldn't do that. Sure the 'man' can repair it, but bang there goes your data! Finally, you reach the conclusion that you need a hard disk backup program.

A hard disk backup allows the large quantity of data stored on a hard disk to be stored in an efficient and sensible manner on the much smaller interchangeable floppies. When I saw one in the MacSig library, I thought "this is for me". Unfortunately, it wasn't - it was old style MFS, not HFS as required by the Plus, and so I was stumped. Then a friend whispered in my ear, try this HFS hard disk backup program written by Dave Wintzler, from PCPC, available from Thames Valley Systems.

The Program

Starting HFS Backup 1.1 brings up the familiar Apple standard screen with pull down blinds. The desk accessories are available (beware of possible clashes), files, edit functions and a 'goodies' section which allows you to configure a backup to your own particular needs.

Selecting either backup, or restore from the files functions allows selection of the device you wish backed up, or restored (useful if you have more than one hard disk!). The entire disk can be backed up, specific selected files or an incremental backup of only those files that have changed since the last backup.

Having selected the backup option and a disk to be backed up, the program builds an in core table of files and folders, and sorts them. Folders can be examined by double clicking, which then causes the files and folders within to appear. Clicking files causes them to toggle between being selected for backup/restore, or being skipped. These functions are very nicely implemented with the folder icon "opening", and the

contents being indented to indicate their relationship within the overall structure.

The 'goodies' option allows you to indicate if you require the files to be backed up in folders (thus retaining the structure of your disk), or if you wish just the files (possibly saving a little space). It also allows you to configure the backup options you require. Normally for a full backup you would format each disk before writing, then check the disk for data errors after writing it (or optionally before) - there is no point in backing up data to a flaky disk. The process can be changed to suit your own circumstances, and some time can be saved by skipping unrequired options - although with backups it is better to be safe, than wise after the event. The program can also be made to ask if existing backup disks are to be reused, a useful safeguard against overwriting your previous incremental. You can also set the name for the backup set, and each disk is numbered sequentially by the program. This name and number should be noted on the label, or you have the prospect of sorting through 18 disks until you give the machine "Backup 5" during the restore.

Each disk takes about two minutes to format, write and verify on an 800k disk. The program tells you which file is currently being backed up. The files are stored on the backup disks as private documents, and so cannot be retrieved without this program. [Ensure you don't rely on the version installed on your hard disk. Keep the delivered software somewhere safe for the day you need it].

Restore follows much the same pattern. A full restore can be performed, or files can be selected to be restored. [Preferring not to tempt fate I have not attempted a full restore]. This must be practised before you need to rely on the material on your hard disk, in order to familiarise yourself with the procedure, and if testing a restore program to even ensure it works!

Quibbles

Among the quibbles I have with this program (and I must stress they are quibbles) is that the backups aren't date stamped in such a way that old copies cannot be overwritten until your chosen date has passed. You therefore need to keep careful track of any backups that have been taken, and their incremental 'sons'. The best way to do this is to give each backup set a different and meaningful name, not just using the default name, and use the 'goodies' option to enforce confirmation if you attempt to reuse a backup disk.

The second quibble (and why this program is not for me) is the time and number of disks it takes to do a full backup. When first running this program I had approximately 13megs of data and program. This I was informed would take 18 double-sided, or an incredible 36 single-sided disks. The doubles, taking about two to two and a half minutes, make a forty minute marathon (more in the three course meal than the cup of coffee making category), plus of course, time for changing disks. This is really more indicative of the amount of data a 20 megabyte

beasty can hold than inadequacies in this particular program, and if I were running a business on the machine I would probably be running a full backup a week and an incremental every night. [The incrementals obviously take less time, as they're backing up much less data - but it may be important to put them back on to the hard disk in the same the order you took them off - don't overwrite newer data with older material. A perfect restore would only overwrite older files]. Any cycle of backups (how often, and how many sets of disks you keep) is really determined by how much you value your data, and in the end can only be up to the individual user. In extreme cases, eg a business' debtor and contact lists, you may even wish to regularly leave a full backup with your bank - in case the office catches fire, or some other catastrophe.

Caveat Emptor

In preparing this article, and testing the program, I never did a full backup (insufficient disks), or restore. So timings and a full examination of the restore function are not available. I can only assume that they are up to the apparent high standard of the rest of the program, and would expect it to be marginally faster than the backup.

If you are in the market for any hard disk backup/restore always ensure that the salesman demonstrates the restore as well as a backup. If you can't recover your data there is little point in backing it up in the first place. Also, since the most likely reason for needing to do this is a disk failure, check whether the program automatically formats and restores the replacement or repaired hard drive you get, or if some user intervention is required. Before it becomes critical practise this procedure! (I've met users who have religiously followed the backup procedures for their computer, only to cry uncle having never used the restore).

Conclusion

In my case the prime value of my hard disk is a large

program library, and text files. The transitory data is of a secondary concern, and the hard disk can mainly be rebuilt from my disk library. Of course this has a cost in terms of losing the structure of the disk, and thence the work to rebuild it, and in particular those programs which were laboriously installed because of their copy protection. On balance the time and disks devoted to this kind of backup are not worthwhile to me.

If your business/life depends on the material on your hard disk, you would be well advised to consider regular full backups, and to make that practical you need a program of this type. This particular program goes a long way towards meeting the requirements of operational simplicity (à la Apple standard), functionality (à la doing the job), a well illustrated and comprehensive manual and a price of about £40-00 plus VAT - I have no hesitation in recommending it. That said, in order to use it properly you must have a good appreciation of what is being done, and why. I hope this article has addressed some of these questions.

For my part, anyone got a fast Macintosh tape streamer I can try whilst making some coffee?

One final thing. DiskExpress is a new utility which reorganises and compresses the blocks used on your hard disk. As you use, edit and delete files, the disk directories get fragmented (the same happens on a floppy - but the space lost is not so great). This program recovers the lost space, will even rebuild corrupt blocks and 'wash' deleted blocks. (When the Mac deletes files the data remains, only the pointers are removed. If you had some really sensitive material it might pay some nosy parker to read your disk using a disk editor, or such. 'Washing' writes nulls/zeros/spaces, or, in sophisticated techniques, a random pattern over deleted files). Anyone who wants to lend me a copy for evaluation is more than welcome.

HFS Backup 1.1 is available from:-

Thames Valley Systems (Maidenhead), 128 High Street,
Maidenhead, Berks SL6 1PT (0628) 25361



MacBackup for 800K disks

In response to requests for a program that will mass-copy 800K disks I have obtained the following information about MacBackup version 4.5 from Practical Computer Applications, Inc. This version of MacBackup uses all available memory for its copies, so if you have a Mac with at least 1 megabyte of memory, and have turned caching off, it will read an entire 800K disk, and copy it back to many diskettes. MacBackup is also smart enough to analyse your original disk and copy it appropriately, ie. it automatically selects 400K or 800K copy, whichever is appropriate. MacBackup also copies some copy-protected software (although not nearly as much as Copy II Mac).

Although MacBackup is not nearly as fast as MassCopy (even with 400K disks), it seems to be more reliable in some ways but it does have the disadvantage that you will have to press a dialog button for each new disk, unlike

MassCopy, which continued the copy automatically.

MacBackup is relatively inexpensive and can be obtained from:-

Practical Computer Applications, Inc.
1305 Jefferson Highway,
Champlin, Minnesota 55316
(612) 427-4789

DataDesk 1.0

The version 1.0 release of DataDesk, a statistics package for the Macintosh, is now available. Earlier releases were incomplete, and rather buggy. The 1.0 release is a full-function statistics package with a desktop Finder-like interface. Features include a full multiple regression including modern diagnostic statistics, a variety of statistical graphics including 3-D rotating plots, data importing and exporting capabilities and the usual array of tests, estimates, and analysis routines. It is supplied on a copy-protected disk, but owners get a free un-protected disk when they return the registration card.

Data Desk has been used in teaching at Cornell University for a year and a half and is currently in use at a number of other colleges and universities. More information can be obtained from Data Description, Inc., Box 4555 Ithaca NY 14852.

Mac System for Sale

In connection with my departure for the United States, and imminent fatherhood, I'm seeking to sell my UK Mac to buy a US Mac. Less than a year old, the equipment consists of:

MacPlus 1M processor.
Apple 20M hard disk.
Apple ImageWriter II.
Scicon Buzzbox V21 modem.

£3,500 for the complete system, including quite a lot of public domain and shareware on the hard disk. Near offers considered. Possible delivery, original boxes.

Deadline February 26th, 1987.
Contact Kevin (011) 7741 000011

MICE 87

The Macintosh Independent Conference & Exhibition

MICE '87 - The Macintosh Independent Conference & Exhibition - now seems set to establish itself as the major event for Macintosh users in the UK. Taking place from the 14th - 16th May 1987 at the Westminster Exhibition Centre, the event already boasts an impressive array of products from UK exhibitors.

"I'm glad to say that we now have nearly all the UK companies represented that we initially targetted as those whose products would be of particular interest to both existing and potential users of the Macintosh," said the Show Sales Manager, Frank Gouws.

Exhibitors from the UK currently include:- A&M Systems, Blyth Software, CCA Micro Rentals, Computers Unlimited, Heyden & Son, Inprint, Linotype, MacEurope, MacSerious Software, Maxima, Symbiotic and Thames Valley Systems. It seems likely that many companies will be announcing new products, particularly in the areas of Desktop Publishing, Graphics and Communications. In addition, certainly one but possibly two new machines should have been announced by Apple by the time the show takes place. As this will be the first opportunity for many to see these machines it will naturally provide an added attraction for visitors to the show.

Alongside the show, the organisers, Quantum Research, in conjunction with MacUser magazine, are holding a three day User Conference. The key topics covered will be Desktop Publishing, Desktop Communications and Desktop Management. Sessions will run on each of these subjects on each day of the show. Sessions will contain two elements - Seminar and Practical. Delegates will have the opportunity to hear experienced users outline and discuss the topic for an hour and then try out what they have learnt in a separate Practical session. The maximum number of delegates per session is 100 - so early booking is advisable. The cost for the combined Seminar and Practical package is £120 + VAT with special arrangements for subscribers to relevant magazines and members of user groups.

"I think that we can safely say that we're moving towards an event that no Macintosh user will want to miss. It will also provide a showcase of products to convince many potential users that the Macintosh is now one of the most effective personal computer systems available", said Iain Norton, the Show Director.

Apple2000 Members can save the cost of membership by attending just one conference seminar at MICE 87. Another good reason to belong to THE APPLE USER GROUP

Conference Outline

Alongside MICE '87 a three day User Conference is being jointly organised by Quantum Research, the organisers of the exhibition and MacUser Magazine. The key sessions will have Seminar and Practical elements. The Seminar element will outline the current status of the market and explain from the user's point of view how the available technology can be used most effectively. The Practical element will involve delegates in using the techniques discussed.

Desktop Publishing

Thursday 14th May 09:00 - 10:00 Seminar 10:00 - 11:00 Practical
Saturday 16th May 09:00 - 10:00 Seminar 10:00 - 11:00 Practical

Business Desktop Publishing sessions for all users and potential users of the Macintosh who are looking for high quality printed output for in-house presentations to newsletters. The Practical session will provide a comparison of page make-up software available for the Macintosh and the use of scanners, laser printers and typesetting equipment.

Friday 15th May 09:00 - 10:00 Seminar 10:00 - 11:00 Practical

Professional Desktop Publishing session for publishers, design studios, printers etc - anyone looking for a low-cost front-end system. Showing major advances in both hardware and software. Please only book for this session if you are from the design/printing/publishing trade as places are at a premium.

Desktop Communications

Thursday 14th May 11:00 - 12:00 Seminar 12:00 - 13:00 Practical
Friday 15th May 11:00 - 12:00 Seminar 12:00 - 13:00 Practical
Saturday 16th May 11:00 - 12:00 Seminar 12:00 - 13:00 Practical

Everything you need to know about communications on the Macintosh. The Seminar session will outline the increasing possibilities of communications with the Mac. The Practical session will demonstrate links to DEC VAX systems, networking around the show, links to Prestel Citiservice and MacTel - the bulletin board for Mac users.

Desktop Management

Thursday 14th May 14:00 - 15:00 Seminar 15:00 - 16:00 Practical
Friday 15th May 14:00 - 15:00 Seminar 15:00 - 16:00 Practical
Saturday 16th May 14:00 - 15:00 Seminar 15:00 - 16:00 Practical

The Macintosh can now claim to be one of the best systems to have on a manager's desk. The Seminar will discuss the use of databases, spreadsheets, graphics, integrated packages and other management tools. The Practical session will enable delegates to prepare an important business presentation in one hour.

All the above sessions are costed at £120 + VAT for double sessions (two hours). For Apple2000 Members the cost is £95 + VAT if seats are booked before 27th March 1987.



Well Mindscape have done it again. In their own unique style, you are now *Uninvited* to a mysterious mansion in the middle of nowhere. Next time drive more carefully, by crashing the car you have started a nightmare that might never end. For all the people who did manage to complete *Deja Vu* a new adventure is born, for those who did not, again the riddles will frustrate and annoy.

The game is full of picture-book artistry and fantastic sound using the Macintosh capabilities to their full. With this game as with *Deja Vu*, Mindscape throws the player in at the deep end where they must either sink or swim. Unfortunately it is all too easy to sink and you will die at least a few times before



you get the hang of the game. Once you have got into the swing of it you will find that there is more than just the mansion to explore. There is also the backyard greenhouse, chapel and laboratory, which lead on to even better things.

Zombies, mad dogs, ghosts, bats and a little gremlin are but to name a few of the creatures you will encounter in the adventure. Watch out for the animation, it is quite amusing and it adds a very nice touch to the adventure.

The concept of this game is revolutionary. Text, graphics, animation and sound are integrated into a smooth, slick presentation of a horror story which uses the Macintosh interface to the full. This entire adventure is played with mouse, only speech is entered by way of the keyboard.

Objects in the graphic screen can be selected, dragged and deposited in the inventory windows and vice versa. On the right hand side of the screen there is a map that shows the exits from the room. To the left there is an inventory window which displays the actual objects which are being carried. The main playing window is in the centre of the screen which shows a fantastic graphic representation of the room you are currently in. There is a control Panel above this window which allows you to *Examine, Open, Close, Speak, Operate, Go, Hit* and *Consume*. These are the only commands that you will need on your travels through the unknown. *Uninvited* is a Classic which has all the suspense and mystery of one of Hitchcock's thrillers and it will keep you occupied for a very long time.



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New from MacSoft! Now you can print from your LaserWriter in a multitude of shades!

With your Macintosh and a LaserWriter you can now produce direct what it would take a normal printing shop 9 printings to produce - a printer would have to make nine passes with nine varying shades of grey.

Each **GreyFonts** package contains nine new fonts which download automatically to your LaserWriter giving you standard LaserWriter fonts in 9 different shades of grey ready for you to use immediately. **GreyFonts** are completely compatible with all programs which allow standard LaserWriter fonts including: MacDraw, MacWrite, Microsoft Word, SuperPaint, PageMaker etc etc. **GreyFonts** are available in 9 different fonts packages each priced at a low £49.50 - remember you will be getting nine different font shades in each package.

GreyFonts packages available at this time include: Times, Helvetica, Avante Garde, Bookman, Helvetica Narrow, Palatino, Symbol & Zapf Dingbats

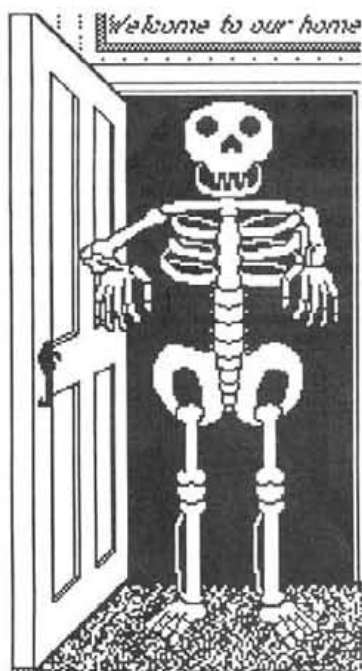
All the usual style options are available:- Bold - Italic - Underline - Outline - Shadow

GreyFonts are available NOW! from your local Apple Dealer - if you have any trouble getting hold of **GreyFonts** or would like further details, please get in touch with the main distributors at the address given above. You may order direct from **MacSoft** by quoting your **VISA/ACCESS/AMERICAN EXPRESS**

This is an example of Times GreyFont
10% 20% 30% 40% 50% 60% 70% 80% 90%

New Macintosh Library Disks

Disk 121 Halloween Night



Halloween Night is a shareware program which was sent to Apple2000 by Prophecy Software. It is a game for small children aged approximately two to five years. The program is based on the traditional American holiday of Halloween from the point of view of a small child. The child, ie. the user of the program, is inside a house looking at the front door. The doorbell rings and when the mouse is next clicked, the door opens. Each time the door opens a different monster is revealed, standing on the doormat. The monsters have come for 'candy' and on the table is a bowl of sweets. If the mouse button is clicked over the bowl of sweets, then the child is able to give the monster some 'candy'. This causes the monster to laugh and go away. There are some very peculiar monsters, while others such as the witch and the skeleton are the traditional baddies of children's stories.



Disk 122

This disk contains **JEFF** and accompanying files, **Mind** with docs, **UW** with docs and **Scriptor**.

JEFF Interpreter V1.0 was written by Xiao-Tian Hu at Drexel University using the Pascal compiler "Light Speed Pascal" from Think Technology Inc. It is based on the version that is available on the PRIME computer at Drexel. The first time he used the JEFF language was in the winter quarter of 1985-1986 academic year in the course Programming Language Concepts. The objective of that course was to teach the skills required to design and implement programming languages. JEFF was chosen to be used in the first half of the course to get the students acquainted with the implementation principle of block structured languages like Pascal.

JEFF is a pseudocode that simulates the ongoing process of compiled block structured language program at the machine instruction level. Using JEFF you should be able to understand how arithmetic operations are performed by the

machine, how information is stored and retrieved by the computer, how procedure (function) calls are implemented at the machine level, how program state is updated when these calls are made and how it is restored when you exit the calls etc. From his experience in using JEFF in the course he felt the toughest thing was that you were not sure of what was really going on on the stack manipulated by JEFF. Even though there are debugging instructions in JEFF that dump the contents of the stack at a certain point of program execution, it is quite obvious that you can not use them at the end of each instruction since they would produce too much dumps. This inspired Xiao-Tian Hu to implement JEFF on the Apple Macintosh computer because of its graphics capability and ease of use. The result is an very interactive interpreter that draws the contents of the stack, the contents of display registers, and the contents of special registers SP, IP, ML, and DT on the stack window. The stack window is updated after the execution of every JEFF instruction and you can choose to view the portion of the stack displayed on the stack window starting

from the stack top or the stack bottom. Also you can shift that portion up and down manually with your mouse. Four ways of running a JEFF program are provided "RUN", "RUN-RUN", "STEP", and "STEP THROUGH".

JEFF is provided as shareware, and the source code will be provided if you send a disk with your payment of \$10.

MIND is a very interesting program by Gregory Dudek. Here is an extract from the documentation.

"The primary function of MIND is to display reminders on the computer screen. These reminders are associated with reasonably flexible time intervals during which they are valid. In addition, MIND also supports the automatic execution of other programs at specified times and some rudimentary "mini-finder" -like functions. It is best to read the documentation before using the program as you probably will not work out all it does just by playing with it.

MIND can be executed in one of several ways. When it is run (or "launched"), it looks in a special file called "reminders" for instructions that specify what it should do. These

instructions have a special format: each instruction is made up of a time-interval specification, an indication of what operations will be performed during that time interval, and some text. An example of a single instruction would be a line that specifies that for the week preceding April first of every year, the message "warning: April Fool's coming soon" should be displayed every time the computer is turned on.

If MIND is run shortly after the machine is turned on, it also looks for a file named "Calendar File". It assumes this is the file maintained by one of the "Calendar" desk accessories. If there are any entries in the calendar for the current or the following day, it displays them. The reason it looks there only if it is run shortly after startup is that if the program is set up to execute periodically, it won't keep showing the same daily reminders."

UW is a multiple window Terminal Emulator for use with 4.2BSD or 4.3BSD Unix systems. Up to 7 independent windows may be created. There are 21 pages of documentation.

Disk 123

DR MAC # 1

DR MAC'S Finder LAYO&FONT

DR MAC'S MacWrite ICN#'s

DR MAC'S Mover ICN#'s

Dan Rose, who wrote DR MAC, has owned a Mac since May 1984 and has 'explored the little guy extensively'. He is not a programmer but enjoys so-called 'power-user' tricks and techniques.

New Go - much improved.

Orion 1.4 - space flight simulator

Columbus - with documentation

Cubes - with source code

Ripple

MacLanding

StuntCopter

Disk 124

Metalware

Metalware Manual

MW example files

Metalware is a program to display and edit a data-file which defines the shape of a part which can then be made by a computer numerically controlled machine tool.

A Message from Max Headroom

This is a sound file, which together with another short music file can be heard by use of the SoundPlay program, also on the disk.

Disk 125

MacAPL Demonstration Disk

Disk 126

Spellswell™ Demonstration Disk

Disk 127

FileMaker™ demo - uses all features but the user may open each file only 10 times

P/C Privacy Demo - a limited demo of P/C Privacy, Personal/Confidential from MCTel, Inc. This is a security program which encrypts any Mac file with a key that you select, making it unreadable to anyone not knowing your key. You may telecommunicate an encrypted file.

Webster's Revenge Demo - uses all features but the number of game boards is limited.

Font Manager Demo

MacLab Demo

macplot - a plotting program with source code

Disk 128

Demo DesignScope™ - for designing logic circuits, with the following files:- 4 QuickFilters, DS Demo Doc, FFT demo, Noisy PPL, Nonideal Modules, Quickstart

Disk 129

D2R - Data to Resource with 14 accompanying files

Dir-Acta-ry

File Converter

File Changer with Docs; allows user to make global style changes in a MacWrite doc; works on 128K and Plus.

HalfTone with Docs - a program to display grey-level files and print to a LaserWriter. Prints ThunderScan 100% scan grey-level file.

LineFeed Strip

PrettyPrint - allows user to print text files from any editor on Imag I, Imag II, or LW. Prints C and Pascal in a readable format.

Plus several other good programs

Disk 130

STARTMAC is a sequencer utility which combines many of the functions currently found in several Public domain utilities. It will display startup screens directly from Macpaint documents, speak any greeting you wish using Macintalk

(including date/ time variables), and launch any number of programs. All of this may be combined or mixed in any order you wish.

All commands are contained in a text playscript which you may create and edit as your needs vary.

Also on the disk:-SysPwd with Docs; Return Clipper 0.9; Restore with directions; LaserKey.Wrt; LaserKey Installer; Mangle with Docs - lets MacWrite users make a global yet selective style and ruler change in a MacWrite document. Histogram Maker 1.03; Font Tester; Fit to Mac with docs; DumbEdit; Disk Timer; Backdrop with instructions.

Disk 131

DES 2.0 uses US National Bureau of Standards encryption algorithm.

Oasis 1.2; Verify 1.1; MenuClock with Documentation; Mac+ Memory map; Fortune with Cookies; DiskCat; FEdit 3.21 plus doc; MEdit 1.5 (no docs)

Disk 132

MEdit 1.5 with 40 page manual. Packit3v1.2; Unpit; Bus'd Out etc.

Disk 133

Desk Accessories and FKeys:- Applifont; DeskZap 1.2; Envelope; HFS Find DA; Calendar 1.3; MultiScrap+; Launch FKey; Lockoutv1.0; Mainstay; Memory Monitor; MiniWriter1.2; MW4.5 Counter; Other 3.0; Set Paths; (46 in total).

Disk 134

Decorative and Picture Fonts:- Aldous, Alice, Border, Camelot, Cartoon, Centura, Chancery, Clertino, Exeter, Icon#2, Ivy League, Klignon, LasVegas, Madrid, Manhattan, Minneapolis, MiscPix, Paint, Premiere, Schematic, Tombstone, Ultra, Uncial and many more

Disk 135

Aladdin Pantomime Script written and donated by member Cliff Wootton.

Disk 136

Apple Parts Catalogue compiled by Cliff Wootton in MacWrite files.

Disk 137

Res Ripper alpha release; see article in this issue.

Thanks to all who have sent in PD progs, especially Sak Wathanasin. N.A.

Product News

Compiled by Jim Panks from Press Releases

All items on the Product News page are from notifications by the respective vendors.

DMS Electronics
SCSI 20 MByte
Hard disk drive
dms SABRU
Barcode Reader

IIGS



Fylde Scientific
pH METER BOARD

Apple II Range

The Mondem



Professional
Bibliographic System



HyperNet,



QWERTYphone



DMS ELECTRONICS have announced that their DMS SCSI 20 MByte hard disk is suitable for the Apple IIGS if used with the Apple IIGS SCSI interface. They are offering this drive for £550 + VAT for a limited period. Their barcode reader, which reads all world wide barcodes is now supplied with a heavy duty industrial barwand and adaptor to plug into the Macintosh Keyboard. This allows any Macintosh software to run without modifications eg Omnis, Excel, Jazz etc, and is the first available in the U.K. The cost of the dms SABRU, barwand, and Macintosh adaptor is £500.00 plus VAT for a limited period.

DMS Electronics Ltd, Bretton Court, Manor Road, Wales Village, Sheffield S31 8PD. Tel 0909 773399

Fylde Scientific announces its first product the pH METER BOARD. This plugs directly into a user slot of any Apple II, II+ or IIe microcomputer, producing a research grade pH/ISE meter which can be programmed to meet the user's needs exactly. The Board allows ion selective or pH electrodes to be connected directly to the microcomputer. This eliminates the difficulties generally encountered when interfacing a Ph meter to a microcomputer: (an inadequate sampling rate, the ubiquitous 'standard' RS232C interface to come to terms with, and, of course, the obscure protocol which the manufacturer has devised to transfer data and commands between the pH meter and the controlling microcomputer).

In addition to the basic software provided with the Board FYLDE SCIENTIFIC also market a range of advanced software to provide the user with all the features normally found in the latest breed of pH meters. These include auto-buffering, automatic recognition of the BS standard buffer solutions, automatic determination of electrode stability, Gran's plots, standard addition analysis, etc.

Fylde Scientific, 23 West Paddock, Leyland, Preston PR5 1HR Tele: Preston 720257

BREAK THROUGH IN CONCEPT: the Mondem is the first system for the Macintosh which overcomes the two classic problems in computer training - MONitoring the performance of students, and DEMonstrating software. The Mondem video network connects up to 16 student screens with a tutor control unit, allowing the tutor to unobtrusively examine individual screens in 'real time' and allowing demonstration of any software direct onto the student screen.

The Mondem is not a network in the conventional sense - ie no data is transmitted. The Mondem links the video screens - just like a television - which means no memory or compatibility problems. Quite simply, whatever is on a screen appears on the tutor screen in MONITOR mode, and vice versa in DEMONSTRATE mode.

Orange Box Systems Ltd, Central Buildings, 13A The Bull Ring, Wakefield WF1 1HB
Tele: 0924 386789

Personal Bibliographic Software, Inc. has announced the new version of the Professional Bibliographic System (PBS) for the Apple Macintosh. PBS is a database manager designed to meet the specific needs of scholars, researchers, librarians, and other professionals who manage bibliographic information.

The Professional Bibliographic System provides 20 different document types with variable-length fields, and records that can be output according to various bibliographic style sheets. ANSI, APA, MLA and Science Magazine formats are predefined; the program also supports user defined formats. Also available are full-text and field-specific searching using Boolean operators (AND, OR, NOT) and parentheses. Personal Bibliographic Software, Inc. also publishes bibliographic software for the IBM PC/XT/AT and compatibles. Price \$295.00

No dealer yet but available from: Personal Bibliographic Software, Inc. Box 4250, Ann Arbor, MI 48106 USA Tel: (313) 663-9052

P & P Micro is now distributing HyperNet, a communications package which works on the AppleTalk network. Published in the USA by the General Computer Corporation, HyperNet gives an officeful of Macs access to HyperDrive's 10 or 20 megabyte internal Winchester hard disk. Any Macintosh in your AppleTalk network can read, edit or transfer files to and from HyperDrive.

HyperNet allows an office that works with both HyperDriven Macs and non-HyperDriven Macs to work together. HyperDrive can become the nucleus of a local area network, giving you a vast collective storage capacity that can easily expand as your needs change. Whether they have their own HyperDrive or not, and whether they use Apple's new hierarchical file system or standard Macintosh files, all of the computers in the Macintosh office can benefit from HyperNet. Price £250 plus VAT.

Available from P&P or local Apple Dealer

British Telecom's QWERTYphone.

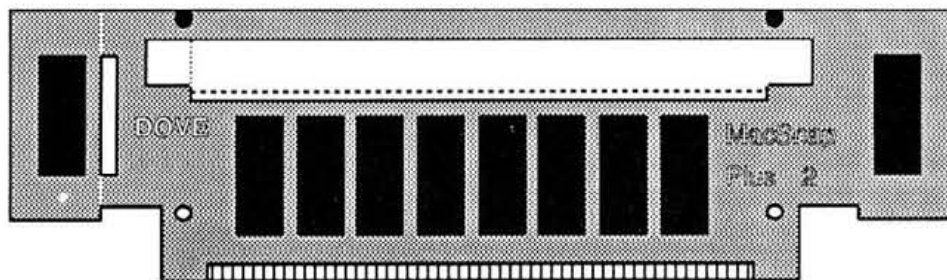
British Telecom announced new features for the QWERTYphone- the ability to completely replace the Macintosh Plus keyboard. QWERTYphone, British Telecom's most advanced featurephone works through a 'Keyboard Adaptor'. This device interprets all of the information from the QWERTYphone, translates it and switches it to the appropriate port of the Mac, either the keyboard or the modem port. Thus besides the keyboard the Mac appears to have a second device attached, a 300 baud Hayes smartmodem. Part of QWERTYphones attraction is the way telephony control has been made available to software running on the Mac. Within BABT guidelines Mac can control all the features of the QWERTYphone. Price: QWERTYphone with 1 years warranty £395 Macintosh Keyboard Adaptor. £ 87

Available from:

QWERTYphone Product Group, 141 Anzani House, Trinity Avenue, Felixstowe, Suffolk IP11 8XB Tele: (0394) 693276

Make it snappy

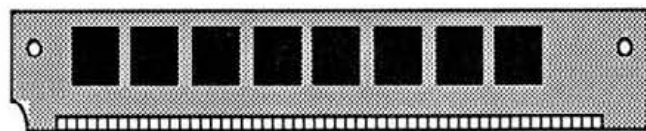
Installation of Macsnap Plus 2 Memory expansion.
By Keith Chamberlain



MacSnap Board (One of Four)

On opening the box you will find a 3.5 inch disk, 4 memory modules and a user manual. If you are fitting one yourself make sure you ask for the installation booklet as mine arrived without one, and it would have been impossible to fit the upgrade without it.

The first problem is that to remove the back of the Mac you will need either a set of special tools which comprise of a hexagonal screwdriver and two back release tongs. I did however manage to find a flat bladed screwdriver which exactly fitted the screws and was able to remove the five screws. Next using two heavy duty bulldog clips, one at each side of the machine I gently eased off the back cover to reveal the main board which is situated at the base of the machine.



Normal SIMM Board found in MacPlus

Take great care to avoid touching any area around the screen as there may still be power retained in this area. Lay the Mac screen down and remove the two cables attached to the board, one ribbon and one multicore noting which way they were attached, although I think they cannot be incorrectly replaced. After removing the paper and foil cover from the base you should now be able to slide out the main board. Lay the board down flat and you should see four small boards mounted at about 60 degrees, these are the Single-Inline-Memory-Modules (SIMM's) and are held in by small plastic clips which need to be removed carefully to avoid damaging them.

The four boards can now be mounted into the MacSnap boards making sure they are securely seated. This cannot be stressed enough as I had great difficulty in making them seat correctly and winced every time a creaking-cracking sound came from the boards as the clips snap back into place.

These boards can now be remounted in the slots vacated by the original boards, noting that one board is labelled specially and is the first one to be replaced. Again great care should be taken to ensure correct seating.

Replacing the main board is a little sticky as with the MacSnap fitted you cannot slide it back into place, but must gently spread the two metal chassis frames apart and snap the board back onto position from underneath. All that remains is to replace the two cables and the back cover and all is complete. The whole job taking about fifteen minutes.

On booting the MacSnap disk a user definable ram disk is installed, I chose to use an 800k disk. Running applications is a dream as the speed is greatly increased and the ability to leave frequently used programs on the desktop is a great advantage. An alternative to the ramdisk is to create a large ramcache and I found using 1280k when using Omnis meant that after one print run which used all the current active data, produced the speed of a large ram based data file without the worry of permanent data loss normally associated with them. All in all the cost and effort of fitting the MacSnap Plus2 is well worth it and if the speed of the Mac is getting you down I would recommend you consider this upgrade.

Happy Snapping

Super Mystery Prize Competition WINNERS

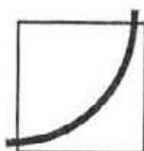
"OH, What have I created....?"
James Wright - Winner of Box of Disks

"Gemme outa this garage, Amen"
Tony Game - Runner Up - 5 Disks

"Dear John"
Lee Harris - Runner Up - 5 Disks

TOPLINE S-Ledger

by Dave Dillow



Upon opening the Sales Ledger, you are presented with the obligatory password prompt. It is an unusual and not a really desirable aspect of Topline in that it is the application which is password protected and not the files. This means that each set of data files will have the same password and can be read by a different program disc. Also the password is echoed visibly so the security conscious must be prepared to have one eye over their shoulder. One of the better features of the initial access is in the program terminating if three invalid attempts are made at access, which I have not noticed on other Mac ledgers, and the number of such failures is reported at the next use of the program. It would be nice however if this were taken further, reporting the date and time of such attempts and even logging the last legitimate uses.

The data files are created dynamically which is a great plus having had many discussions in deciding often incorrectly the maximum capacity required by a company. Topline has full HFS, Laser and MacServe support. The program can be made to crash quite easily and irreparably however if the Laser is disconnected.

Entering customers and stock items is straightforward although three lines of 25 characters for customer address is rather miserly and the details entered for stock items is also limited.

Topline expands the Mac environment with an incredibly easy to use "drag n paste" operation whereby customer and stock details are inserted simply by dragging codes onto windows from the relevant lists. A Calendar Desk Accessory is included



in the program which can be used as a diary and allows dates to be 'dragged and pasted' where required. Additional text is catered for adequately by menu choice.

The find operation on customer code could be improved with the ability to search for part of the name or address rather than only by code. Greater control on resizing the customer/stock list windows would also be a help.

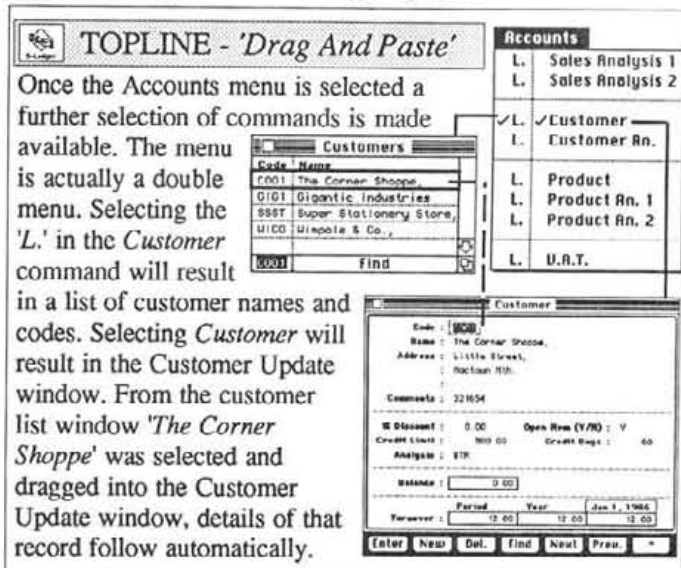
Topline stores all unpaid invoices in their complete form without excessive use of space allowing disputed and repeat invoices to be prepared very easily. Invoices may be printed as produced or at a later date by batch, a useful feature which seems to have been dropped from other systems. Balance brought forward and open item customers may be mixed within the ledger.

Reports can be printed to disk in a variety of formats (Text, Syk, Excel, Database with either tabs or spaces) allowing easy integration with other programs. The printing options for documents allows use of letterhead or plain paper without becoming overcomplicated on layout design.

Payments may be allocated automatically to the oldest outstanding invoices or allocated manually but strangely credit

notes do not have this option. mistakes are catered for by a reasonable method of journal entries.

Finding a use for all five of the analysis groups should occupy most users for a considerable period of time and the audit trail for nominal ledger transactions is clear for posting into any nominal ledger system. Do the authors intend to write their own integrated nominal ledger system?



Summary - The main function of a sales invoicing system is for the user to spend as little time and effort in preparing documents leaving the maximum time for actually earning and collecting money. Topline achieves this very well scoring highest in it's speed and ease of operation and a very good Mac interface, but reporting and the password system could benefit from improvement.

For - Batch Processing • Speed and ease using drag and paste • Ease of data transfer • Reports unauthorised access attempts • Dynamic storage

Against - Password Echo • Miserly on customer/stock details • System crash if no laser connected • No dedicated nominal ledger module • Find by code only

Requirements - Minimum of 512K Macintosh with two disc drives. File sizes restricted by available memory space only. This program, v1.2 9th October, is copy protected and hard disc users will be annoyed by the "Insert Master Disc" prompt.

Price - £395, £645 with Purchase Ledger Option.
(Not available at time of review)

Availability - From your local Apple Dealer or direct from:
MacSerious Software
17 Park Circus Place, Glasgow,
G3 6AH. Tel 041-332-5622



Mac Expo San Francisco 1987

An in-depth report of the American scene by Irene and Dave Flaxman

Having had a taste of MacWorld in Boston, we were told that the San Francisco Expo is much larger and more interesting. What a comment! We were impressed by Boston, and didn't have time to see everything there, so San Francisco must really be something to write about!

Of course, there's only one way to find out - so we booked a flight, packed our bags, and set off for California.

Off to Apple Land

We arrived two days before the Expo started, so hired a car and headed for Cupertino (where else?). Apple's offices surprised us - they comprise of around twenty separate buildings of two or three storeys. Light and spacious, they house the administrative staff and developers as well as International Division, library and company store (not to mention Mr Sculley, of course).

We had hoped that we might visit the Macintosh factory at Fremont, but this was not allowed as they had new products on the production lines. At Fremont, separate buildings house the Macintosh and LaserWriter production facilities, a third houses the administrative staff, and a fourth is being built to accommodate the production of logic boards.

We heard plenty of rumours, as to what the new products will be. Dealers are expecting two new Macintosh announcements - a 2 Mbyte machine, with two built in disk drives (we did actually see someone walking around the Expo with a twin-drive Mac in his hands!); and an 'open-architecture' version to allow the user more flexibility. Are the rumours true? - only time will tell, because the Apple employees were not giving any hints!

Apart from that disappointment, we were made very welcome by the Apple personnel wherever we went, and the two days sped by. We spent some time with the folk from User Education, who write the manuals we all love so well. Naturally, they were giving nothing away about new products - but it does no harm to ask! Our next major stop was in Customer Support, where we listened in to the calls coming in from Apple users all over the States: as in the UK, users were advised to seek advice from their local dealer, rather than ask Apple - the Customer Support personnel are not

technically qualified, so would not be able to answer many of the questions, regardless of the Company's policy. Apple are keen that dealers must provide a good service, though, so callers are advised that they should contact Customer Service again, if they find that their local dealer does not give them the assistance they need. Apple are very keen that their dealers have a good reputation, and are pruning the dealer base, as has been done in the UK.

We spent quite a while in the library. This is for the use of all staff, and is really comprehensive, providing a wide range of magazines, books, training videos and software. The videos were very well presented, covering a wide range of topics - not only computer-related, but also management training topics, marketing, etc. We spent some time watching a couple of the annual reports to employees. Last year's included a preview of the latest advertising campaign by BBD&O (although they have prepared the international campaigns for some time, they have only just been given the USA account) - the videos are impressive, addressing the education and the business markets with a new slogan "The Power To Be Your Best". Unlike the video of Steve Wozniak's visit which Apple UK supplied to user groups, the employee reports prepared by Apple USA are very professionally finished: not simply recording the speech, but adding a title and closing credits which make all the difference.

Spy's at H.Q.

Apple have promised some interesting developments in the coming year, with the emphasis being on DeskTop Communications. It is recognised that flexibility is essential - Apples must be capable of communicating with other Apples, but this is not enough - they must also be capable of communicating with other micros, minis, and mainframes. As well as the open architecture Macintosh, a new networking capability is promised which (we are assured) will surprise us all.

We really liked Cupertino - it is quite a community (and it had the best shopping centre we could find all holiday!). Hewlett Packard also have several offices there, and software houses abound in the towns around about - the whole penninsular

seems to be a computer community!

At the Expo

The Expo itself lasted for three days - Thursday 8th January to Saturday 10th January inclusive, opening at 11.00am and closing at 6.00 pm each day. We were also invited to some early morning meetings and some evening get-togethers, so it was none-stop Mac-chat for more than twelve hours a day!

With 250 exhibitors, we still didn't have time to speak to them all, or to take in any of the conferences.

We were pleasantly surprised to find that many of the exhibitors we had met in Boston actually remembered us, and they welcomed us back like old friends. I always had a bad impression of Americans, having come across a few in Europe, but that was before I met them on their home ground - they really are so friendly and helpful!

As you would expect at MacWorld, the emphasis was on Macintosh - but we did think that there might be more evidence of the Apple IIGS, since it was introduced so recently. We found out later that there is the same supply problem in the States as we have over here - there are none available, although dealers were hoping to have them in time for Christmas (in fact, they have been advised not to advertise the IIGS). Apparently, this delay is due to the failure of one particular chip but we are told that this has been resolved so that supplies should start coming through now.

Machine Shortages because..

There are shortages of Macintoshes and LaserWriters, too, since both production lines have been turned over to the new products. So, short supplies are not a problem that is peculiar to the UK!

What is to be Apple's direction in 1987? The emphasis is to be on Desktop Communications, with a promise of a new networking system, to allow communication with other systems - mainframe, mini and micro. They expect an increase in the number of companies using networks - from 33% to 80% by 1990. A good initial design by Apple will mean that no re-design is necessary. The Appletalk network will allow easy communication with other systems, and third party products can only increase flexibility.

Dealers - US Style

Apple expect their dealers to do more than simply sell - they must offer consultancy and system integration to their clients. It is seen as essential that each user is provided with the system they need, to strengthen the user base.

Talking to dealers in the local area, this is echoed - they do have to provide an advisory service for potential customers. We did not meet any dealers who sell only Apple products - they find it strange that this is common in the UK. Most deal with IBM or HP as well, and some handle several systems. All stated that they prefer Apples (in particular, the Mac), but they seem to sell more IBM or HP - it seems Apple still has a way to go in the corporate market. One interesting comment was that a manager will buy IBM or HP for the secretary and other employees, but will use a Mac for personal use (can't understand how to use the others!). The great thing about the Mac is the consistency of the operating system -

having used one program, you can always find your way around the basic functions of another. Of course, this makes program development rather more difficult for the programmer, but eases life for the user. As one dealer said to us, he prefers the Mac for this reason - if he wants to quit from a HP program, he might try typing in any one of about eight different commands!

We asked for DTP demonstrations on both IBM and HP configurations, but nobody could oblige. Although we are told here of the DTP facilities available on other machines, the American dealers told us that no such systems exist yet, and (when they are introduced) they will be very expensive in comparison to the Mac system. The Mac is definitely still the leader of the field.

We found some software stores which specialised in Apple, or even in just Macintosh! These were not small, either - they seemed to make a good living from the trade. The variety of software on offer was much greater than we have here, too. One store in San Francisco sold only Macintosh software, all at 20% off - I have never seen such a comprehensive choice, and they had four different configurations of Macintosh (e.g. hard disk, external floppy, ImageWriter, LaserWriter, etc.) so that their customers could try out the programs to ensure they were happy with their choice before buying!

What do the local dealers think of the Expo? Apparently, it has changed in character as the Mac has become more accepted and more sophisticated. The earlier shows were very informal, with all the developers there in person, sitting in little booths, and you could go along and speak to them personally - often learning a lot. These days, there are too many sales personnel rather than technical personnel and the atmosphere is different.

I have to admit that we really enjoyed

chatting to Bill Bates of Knowledge Engineering (Just Text). It was good to speak to somebody who could take the Mac to its limits, and he seemed quite happy to answer any questions that visitors might ask. His was a very busy stand.

An insight into the future!

John Sculley held a press conference on the first day of the Expo, along with the top men from Adobe, Aldus, Letraset, Microsoft and Word Perfect.

It all made interesting listening, as they each revealed their plans for the future and the new products they were close to releasing.

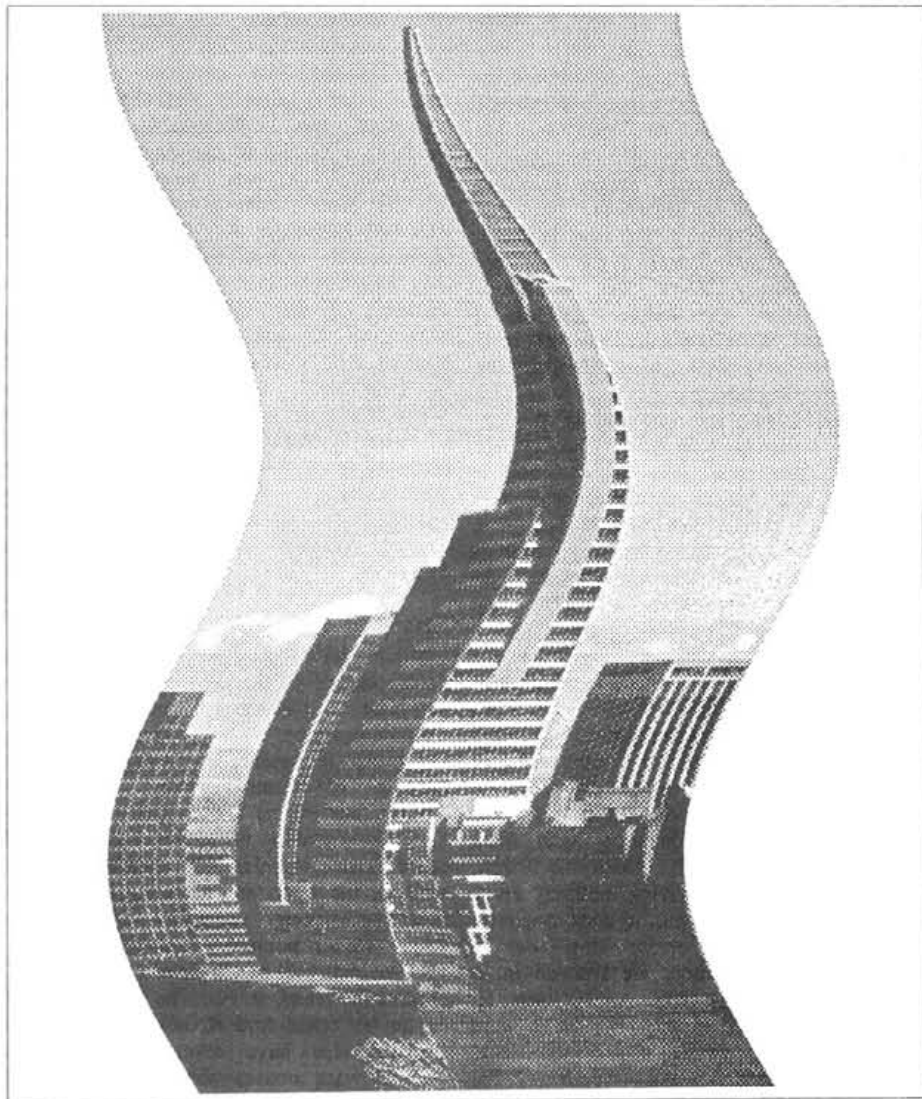
Desktop Publishing is now a year old, having been introduced when it was recognised just how powerful could be the combination of Macintosh, LaserWriter, PostScript, and page-composition software. This combination provided a solution to a problem common to so many users, and opened up the marketplace for the Mac.

Many new business applications were developed, as software houses recognised that the business community were now

taking this machine seriously. The quality and power of many of these packages took the business world by surprise - just try comparing Excel with the 'old faithful' Visicalc package, to see how software has developed over the years.

Apple depends on third party developers to introduce new products and thereby encourage new markets. In the Mac field, third-party activity is great; but these software houses are not intending to develop for the IIGS, so we were left wondering just where the new machine would be in twelve months? Having said that, Apple USA announced a new Apple IIc just after the Expo finished, so the Apple II line is certainly not dead. All were intrigued by Apple UK's decisions to drop the Apple II range (other than the IIGS), and to have no upgrade path - these decisions are at variance with those taken in the States.

Third party developers in the hardware fields are seen as being equally important as the software developers. With large screens, colour monitors, scanners, OCR's and spoolers all being recognised as adding to the power of the basic machine.



Skyline of San Francisco - Postscript rendition by Dave Flaxman

You have to be careful, though, as some enhancements may invalidate your warranty - this included a service offered by one enterprising guy, who would spray your Mac any colour you wanted!

Statistics presented by Mr Sculley showed that the DTP market is split into three main functions - artwork & illustrations (20%); page layout (50%); document processing (30%) - and that usage in all three areas is growing. Types of organisation using DTP communications, e.g. advertising agencies (40%); other service firms, e.g. finance houses (20%); departments within large companies (20%); government (10%); education (10%). 67% of all DTP systems are used by 2-10 people; 15% are used by more than 10 people; with more than 250,000 Appletalk nodes.

DTP is expected to grow during the 80's, with new techniques coming onto the market. In particular, CAD and presentation graphics are expected to improve. These developments will not be confined to Apple products, but that is seen as a healthy sign. Apple expect to remain the leader and innovator, no matter what their rivals come up with.

All change at Letraset

Letraset announced a change of tactic at the Expo. Letraset (based on MacPublisher) will not now be released by Letraset - the rights to MacPublisher have been returned to the developers, who still intend to complete their enhancements and distribute the program in their own name. Instead, Letraset have purchased the sole rights to distribute Ready Set Go III for the Macintosh, including any future developments. This time, the name will not be changed, but the program will be available only via Letraset-approved Apple dealers and VAR's.

Why the change? The main reason given by Letraset was that MacPublisher was not ready to ship by the agreed date (i.e. for the Expo), but Letraset also stated that they think RSG3 to be the best product of its kind, and their intention is to be 'the leaders in page design software for the Macintosh'. The price is to be increased by \$100 on February 15th, Letraset feeling that this is necessary to allow the improvement of marketing strategies and to provide good support for the user base.

Letraset listed some of the good points of RSG3 - speed, agility, responsiveness, functionality and ease of use heading the list. Functions include kerning, linked blocks of text, a glossary, a spelling checker (American, no doubt?), hyphenation and auto runaround (i.e. text will flow around a block of graphics or text already placed on the page). Letraset echoed Apple's own commitment to training and service for users - this seems to be message put across most strongly throughout the Expo.

It will be interesting to compare Ready

Set Go III with PageMaker v2.0 when that becomes available. Naturally, each company maintains that theirs is the better program - so an impartial comparison will be interesting. (eds note: June issue will contain DTP & WP special)

What of MacPublisher? The authors plan to release the new version of their program independently - again, they feel that theirs is the best desktop publishing software, so perhaps we should have a three-way evaluation.

DTP Scene hot's up

Adobe announced their first end-user application for the Macintosh - the Adobe Illustrator. This seems to be a very powerful graphics package, and is expected to meet a release date of March. The European launch will be at the Expo in Rotterdam (April 22nd to 24th), according to our contacts at Adobe.

John Warnock, President of Adobe Systems, introduced the product at the press conference held immediately before the start of MacWorld. He pointed out that the package is intended for use by the 'serious illustrator', and that it should be compared with application programs

got the message that all developers realise that they cannot afford to work in isolation. One of the greatest powers of the Macintosh is the ability to easily move information between applications, and software houses do seem to be aware of this, so they do communicate (or, so they tell us).

I look forward to seeing more of this particular package, as it did look impressive. I hope that Adobe meet their release date - John Warnock promised that they would do so "Come hell or high water!"

Other news from Adobe relates to the laser fonts they produce. Nine new ones are being introduced, and they are now publishing two different versions of each font. The cheaper version (at \$185) is still limited to use on a single output device - our criticism that this is too restricting (what happens if your LaserWriter self-destructs?) was countered by the promise that all registered users would be supplied with a replacement disk within a couple of days. The new version (at \$380) will allow you to download to five output devices. We believe that Adobe are looking into the possibility of

MACINTOSH

T H E R E I S N O S U B S T I T U T E

costing \$1000-\$2000, rather than with PC graphics products.

The screen display is postscript-driven, so that it doesn't look like a typical Macintosh display. The program works thus:

First, scan an image, to input a background picture into the Macintosh - any scanner can be used, including the Thunderscan.

Then, trace over the outline, zooming in to trace over any fine details.

This produces an outline which can then be enhanced as you please, to produce your finished illustration.

The above is an example of how the program may be used, and may seem oversimplified, but the output was exceptionally fine.

It is undoubtedly a very powerful package, claiming an increase in productivity by 200% - 400%, and aimed at target markets which include the larger corporations, publishers, newspapers, fashion houses, to name but a few.

The retail price is pitched at \$495, which includes a video presentation and tutorial. This is the user education and training theme coming to the fore again - a common theme from all speakers!

Compatibility

Compatibility with products from other software houses has been promised - we

distributing unprotected software. This would be popular with everyone, but obviously they must first be convinced that this step would not lead to a reduction in income due to piracy - we shall see what they decide!

Adobe have confirmed that McQueens have been appointed UK distributors for their products, so they will be providing the backup we need from a local location.

Support important

Paul Brainard, President of Aldus Corporation, was impressed by our Apple2000 magazine, particularly as we use PageMaker to produce it - they are always keen to see examples of how their product can be put to good use.

His presentation confirmed that Desktop Publishing still has a long way to go, and that the really important issues today included training, support and development. Aldus work with Apple staff world-wide, and with other third-party developers (including Microsoft and Adobe), the aim being to ensure compatibility between products. 1985/86 laid the foundations for Desktop Publishing, now we can expect to see a strong 'second generation' of hardware and software built on that base.

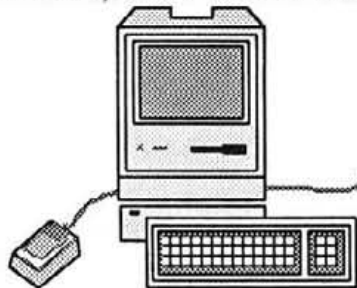
As with other presentations, the emphasis was on training. New products include PageMaker Portfolio - templates,

and advice on page design: PageMaker Classroom - a 1-day end-user training course: PageMaker v2.0 - promised for 'first quarter', this will include automatic hyphenation, bigger documents, etc.

The aim of all the representatives was stated as being to provide the complete solutions for the customer. If all the developers live up to their promises, we should see some really exciting developments for the Mac during 1987!

New WP Packages soon!

Another third-party product highlighted at the first MacWorld press conference was Word Perfect. This word processing package is to be available on the Macintosh, as well as other micros. Alan



Ashton, the company's President, revealed that the program has been two years under development to date, the Beta-test version being due before March.

He asked the question "Why does it take so long to develop software for the Macintosh?", and answered it by saying that expectations were so high. End-users expect the software to be really easy to use, but this means that so much more effort is required of the developers.

He echoed comments that we had heard elsewhere - that combinations of different micros were being purchased within the organisation - Macs for the management, but IBM's for the staff!

Ann Arbor are developing a new word processor, to be called FullWrite, and are hoping for the same success as they achieved with FullPaint. They have Beta-test versions out, and expect to launch the product in March.

Microsoft Word v3.0 was promised for January 1987, and Microsoft report that they are keeping to this timeframe - in the States, at least! When I asked about the UK launch, they did not have any knowledge of the release date or price. Upgrades in America will be \$99, so we shall see how the UK version compares.

The difference between v2 and v3 was likened to the difference between Multiplan and Excel. As I am a real Excel fan who never liked Multiplan, I will be interested to see what this means. Promised features include increased speed, page preview (side-by-side) and 'quick switch' to allow you to use switcher to transfer data to another application for editing then transfer it back to Word.

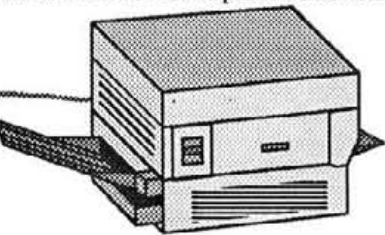
Although Microsoft distribute versions of their products for other systems, they feel that the Mac versions are easier to use

and more powerful. They now use Macs in-house for their own word processing, so even more enhancements are promised (it's amazing how many improvements you can think of, when you have to use the system yourself!)

Developers get together

We sat in on a MacAPP developers meeting on the last day of the Expo. We came on it by chance, and could only stay for a short time, but it was really interesting, and we joined the group so that we could keep in touch with developments.

The group has only recently been formed, and is in close liaison with APDA (see our earlier report). Several Apple employees were there, having been involved in the development of MacAPP.



Overseas membership costs \$23 per annum, which includes 6 newsletters (distributed by APDA). They will soon have one PD disk available - an object code library for \$10. MacAPP is a development tool for programmers in Pascal or Assembler, with Lisp, C and Fortran promised soon. An introductory book 'Object Oriented Programming for the Macintosh' is available from APDA at \$34.95.

I have to admit that I was somewhat lost-OK, so I have done a fair bit of programming in my time, but I am definitely rusty - and these people made me horribly aware of that fact. We don't yet have many details of the organisation or the facilities it offers, but we will prepare a report for the next magazine - by which time we should have more information.

LaserSpool, which was reviewed in the December issue, has been enhanced - we shall be reporting on the changes in the next issue.

We have not been advised of a UK distributor, but the spooler can be bought direct from the American distributor: MacAmerica Price is \$100 plus Postage and packing.

Zen and The Art of the Macintosh by Michael Green does not seem to have a UK distributor yet - but it can be purchased directly from:

Jim Fittsimmons
MacAmerica
18032-C Lemon Drive
Yorba Linda
CA 92686
USA
Tel. 714-779-2922

Price is \$16 plus postage and packing.

JUNE ISSUE - DTP & WORD PROCESSING ON THE APPLE COMPUTER

Articles Wanted - We are putting together an issue devoted to DTP and Word Processing on both the Apple II & Macintosh Machines. We would therefore like as much input from the membership. Reviews, Tips and the uses that members put these type of applications too would be welcome. We will be awarding a substantial prize for the best item submitted. Please write now for 'contributors guidelines'.

Tempo

Review by
Richard Wilday

or how to make your Mac-ing Faster, Easier and a lot More Fun!

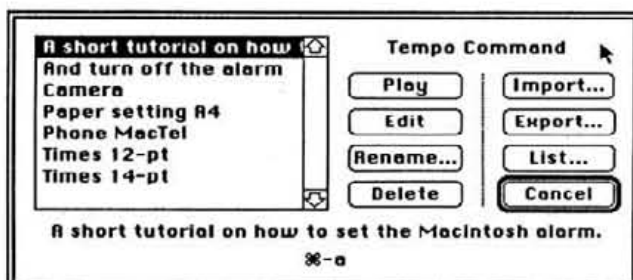
Tempo is a macro generator like no other. It can even out perform some of the famous macro options in Excel. The 1.1 version has over 50 improvements and has been upgraded to take full advantage of the Macs new 128 rom. and keyboard.

You install Tempo on your System file under its own installation program. This adds a large 75K to your System so it can cause problems unless you have a hard disc or 800K drive. It is then available on any program that you can use desk accessories. When you first access Tempo you are presented with a dialog box asking you which drive you wish the macro table to be saved. The clover leaf symbol appears on the menu bar to show Tempo is ready for use. It will stay there even if you quit one program and start another. A beep is sounded to remind you that Tempo is still active. To make a macro could not be easier. You select 'Start Recording', perform the action and then choose 'Stop Recording'.

The action can be any series of Macintosh commands, key strokes, mouse movements and mouse clicks. You are then asked to assign a name and command key to the new macro.

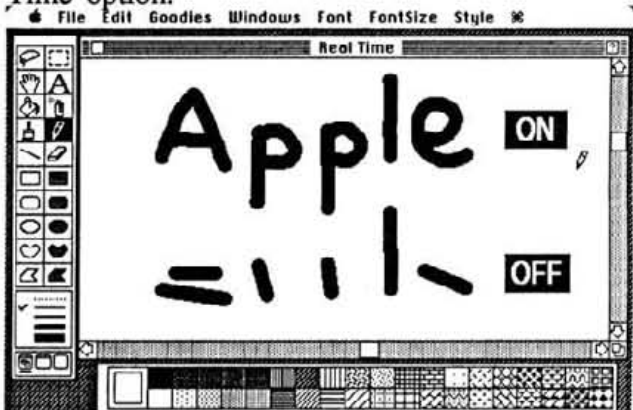
This can be any combination of Command, Option, Shift, Caps-Lock or Number Pad Keys making 662 possible macros. Command keys already in use in your application should be avoided (i.e. Command C ext).

To use the macro is just as simple and can be accessed in two ways. First you can use the command key you have assign to it, or select 'Tempo Command' from the menu. You are then presented with a dialog box with a list of all the macros that you have constructed.



It is also possible to import macros from other discs. There is a facility to edit macros but this can be a bit tricky therefore it is recommended that large macros be made from smaller modular ones and then use Tempos ability to string them together.

Normally Tempo only remembers mouse mouse movements at the start and finish of holding the mouse button down. This is usually to your advantage as it removes mistakes and pauses between movements. To record precisely what the mouse does you have to use the 'Real Time' option.



The true outstanding feature of Tempo is when you use the option menu during a recording. The sophistication of the program allows you to:-

Pause - for an interval of hours, minutes or seconds or to include a dialog box.

Branch - to compare a clipboard or dialog statement.

Loop - until a criterion is met.

Open an application

Tempo™ 1.1 Installer

The use to which Tempo can be put is only restricted by your imagination. Here are a few examples.

Use a macro to set the Page Setup to A4.

Copy the mouse movement menu items in your word processor to macros giving you complete keyboard control

Use it to copy an object in Easy3D at various stages and paste it into a VedioWorks cast for spinning animation.

Create a macro to 'Eject lower disc' or even 'Shutdown' but make sure that it is a fool proof combination of keys. For the really mischievous among us send a disc to a friend that brings up a dialog box 'OK TO ERASE HARD DISC', ask Jim Panks how that feels!

At around £90 an excellent program. No Mac should be without one.



Back Page Burlblings

Taking an enforced holiday due to the weather I tried to catch up with all those things I had meant to do. You know catch up with the latest news on Mactel and what have you. Ha! I should have known that it would not be that easy. Down here we had a five minute wait for a telephone line - which really put

paid to the auto-dial modem, then the ice and snow managed to wreck havoc with the electric supply. On and off like a Yo Yo, up and down, power surges, what do we all do - keep plugging away on the keyboard with one hand on the heart saying "I hope I don't lose you baby". To be quite honest the Macs power supply never let me down. The power fluctuated but not once did I lose anything, mind you I would not recommend it to anyone with heart problems.

The whole Apple World has come alive once more - we hear Mr Scully talking about the next reveloution - 'DeskTop Communications' - not before time either. Perhaps Apple will do what should have been done years ago - make machines talk to each other without worrying about how it is done - a la Mac.

The constant talk of DeskTop Publishing seems funny at times, Apple have a good hold at present and we hear rumours of 'Big Blue' catching up. From the information I have it looks like the IBM solution at the moment is more talk than action. PageMaker 2.0 and the IBM version have been held up once again and apparently the IBM version is not that good. I suppose if you already have an IBM it will have to do for now.

At the latest Mac Expo it appears that Mac's have finally been accepted in the corporate zone - no longer left out in the cold the Macintosh now sits on many a corporate desk - hopefully the same will happen over here?

Last issue I mentioned Techno-hype and I see that the first WORM drive is now available for the Mac - you need to have an ordinary hard drive to get the new 200 or 400 Meg WORM Drive going. It is a double sided device with removable cartridges and the idea appeals to me although the price will not be cheap. The press release forgot to mention price, I wonder why?

New products are coming thick and fast for both the Apple IIGS and the Macintosh - but at present it all seems to be VAPOURWARE. I am sure software publishers and developers announce products well before they are fit to sell to:

- a) Scare the opposition.
- b) Trademark the name.
- c) Hopefully get cash in the bank from pre-sales and see what demand they will get.

In the US they have had large publicity campaigns which have taken prospective purchasers money for long periods before the product is out of the development stage. I hope that this will not happen over here. If any of you have any experience of this sort of treatment why not write in and air your views?

Bye for now - Techno Man. 🍏



The new year has arrived with great expectations from Apple Cupertino with new hardware arrivals imminent. The Rumour Factory is at it again and whispers of new delights from the hive is keeping everyone on their toes. Well to put you out of further misery and to add to the excitement and confusion, here is the latest gossip. The first seems to be yet another Mac upgrade path to not the 68020 as we all expected, but to the more diminutive 68010. There is a tale of a possible single slot to be offered on the board which raises the possibility of colour. An upgrade price of \$800 has been mentioned. As Apple wishes to keep at the forefront in desktop publishing expect to see a whole range of new related products. A new Laserwriter with the new faster Adobe postscript. Apple are also working on a 1200 dpi laser, hush hush, but that will take time.

Two new Mac-like workstations, 68020 at 16Mhz, are expected, with open architecture and IBM type styling. Built in twin 1.4 Meg floppy drives and optional internal 20 or 40 Meg hard drive. The ROMS, 256K, will include colour quickdraw routines. A Foley sound chip with four voices. Separate monochrome 12 inch screen, 73dpi at 640/480, with a 13 inch colour screen to follow, and later a 19" colour with 1280/960 for 88dpi. Inside 6 slots, one for the monitor and five for the user. Two SCSI's with one internal and the external using the DB25. Also an Appletalk file server. Full MS-DOS IBM compatibility with a third party 286 card for the 5.25DD. Unix is in the works with a 386 and RT emulator using Unix v5.2 with quickdraw commands in portable C. These machines are up market and they won't be cheap. Drat!

All this before the summer, March is favourite, but expect to hear of clandestine meetings in February. Well those are the favourites in the rumour race, it remains to be seen which arrives at the winning post. Regardless of which hardware comes first, the winner will be the piggy bank at Apple Computers, and our depleted wallets will be the losers. If it is going to cost us even more money, what's all the excitement about? It's pride. Pride in using products of a company that leads from the front in concept and innovation. Let's hope the Easter Bunny arrives with more than just marshmallow eggs.

Back to reality now with your Apple2000 year planner. Use it to keep track of the many shows, seminars and group meetings that have been planned for 1987. First priority is our Annual Apple User Group's Show which will be held on the 21st March, 1987 at Bewdley in the West Midlands. It is our only opportunity to meet one another, put faces to names, chat over a beer and buy some fantastic bargains, so come along and enjoy what promises to be a great day out. We are budgeting for 500 plus so help us with the organizing by ordering your tickets now from Apple2000, and let's see you there! 🍏

Great news for Macintosh users... ...Even better news for Omnis users

If you're not yet an Omnis user, you can't fully appreciate the combination of power, ease of use and adaptability that makes Macintosh work for your business. The latest Omnis news gives you even more reasons to ask your dealer to show you how Omnis works for business.

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The best of MacPaint and MacDraw:

SuperPaint is the most advanced graphics creation tool available for the **Macintosh**. It has two layers; one for editing dots like MacPaint, and one for manipulating objects like MacDraw. The features read like a Christmas wishlist. Full-screen editing. Multiple windows. 3 levels of magnification. Reduced view. Creates shapes bigger than the screen. Draws circles and squares from the centre. Text can be edited. LaserWriter Fonts. Open and save MacDraw PICT and MacPaint files. Print multiple copies. Colour printing on ImageWriter II. Makes full use of big screens. Best of all, there's LaserBits™, dot-by-dot editing at 300dots-per-inch resolution. The results printed on a LaserWriter are stunning! Paste these graphics into other programs and they retain their 300dpi resolution! In fact, the Superpaint file format has just been adopted as the standard by all seven major US scanner manufacturers for 300dpi graphics editing.



Here's what the US reviewers have been saying about it:

"**SuperPaint** is the best paint program available on the Macintosh today" - Adrian Mello, MacWorld, Jan '87

"I can really review **SuperPaint** in two words: Get it!"

- Sharon Aker, MacUser (US), Feb '87

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- CJ Weigand, MACazine, Jan '87

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- "Keep on same Page" paragraphs
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... and it costs £165.00

Did we forget anything?

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The MacSerious Top 10 February 1987

- 1 SuperPaint
- 2 WriteNow
- 3 Dark Castle
- 4 MacGolf
- 5 Lightspeed Pascal
- 6 TML Pascal
- 7 More
- 8 Mac3D
- 9 Silicon Press
- 10

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A complete high-performance C programming environment providing in a single integrated Macintosh-style application, a multi-file text editor, high performance native code compiler, ultra-fast linker, and automatic make facilities, as well as full Toolbox and Unix-compatibility library support. Complete implementation of the C language as defined by Kernighan & Ritchie's **The C Programming Language** plus more recent features. **LightSpeed C** compiles more than 10 times faster than any other Mac C compiler. Generated code is between 70% & 90% of the size produced by other compilers, and execution time varies between 65% and 95%. Call for full details.

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